

AR36









# Where it all began

For Imperial the place was Ontario  
and the time was 1880.  
A lot of things have happened since.

**W**hen Canadians think of the oil industry nowadays, they think of the Prairies, or maybe the Arctic. Or the Arab countries. Or Texas, or Venezuela. But Ontario? Never.

And yet Ontario is where the modern oil industry began more than 100 years ago, in the gooey swamps that were known as the Lambton gum beds. A company called the International Mining and Manufacturing Company was making some kind of product from southwestern Ontario's oil-saturated earth around 1850. Before the decade was out a man named James Miller Williams was producing so much oil from his 100-foot wells that an early newspaper said one of them was overflowing at the rate of 300 gallons an hour. What didn't overflow went to Williams' refinery, where he made a product known as 'burning oil' for the lamps of the time. He sold it for \$1 a gallon, which was 25 cents cheaper than whale oil.

In those days all you needed to get into the oil business was guts, and plenty of people had them. When Hugh Nixon Shaw struck oil on Jan. 31, 1862, in a well at Oil Springs that flowed at the unprecedented rate of 2,000 barrels a day he started a frantic oil boom. Men began sinking wells wherever their hunches directed them, with no thought of what they would do if they found oil. Many of them did, and the oil they discovered flowed away

down Black Creek and the Sydenham River out to Lake St. Clair in a colossal slick that is said to have wasted a million barrels of oil. The skipper of a schooner that sailed through it reported later to the ship's owner in Kingston that petroleum was flowing on the river a foot deep. The shipowner – his name was John Noble – took off at once to join the rush. Those wells flowed almost without control for more than a year and then, within a few days, they all dried up. While they flowed, there was more work than the local labor force could handle; when they stopped, everybody was out of a job.

But new wells were drilled, and more oil was found, and the cycle continued. To get it out teamsters hauled it on skids over a track that was described as a mudhole 12 miles long and of unknown depth. The road that replaced it in 1862 was made of planks, and at one time there were as many as 300 teamsters hauling 16-barrel loads out to the railroad at Wyoming, for \$1 a barrel. Some of the barrelled oil was floated down Black Creek and the Sydenham River to be hoisted aboard schooners and sailed to ports around the lakes.

Most of it was exported to Europe as kerosene, but after 1870 that market began to disappear, displaced by a cleaner-burning kerosene refined from oil produced in Pennsylvania. The Canadian market could not possibly absorb all the oil Ontario's



wells produced, yet Canadian producers still pumped every drop their wells could be made to yield. The result was inevitable – an oil glut that saw Canadian crude, which had fetched a dollar a barrel in 1870, drop to 10 cents in 1876. The industry faced disaster.

In this desperate situation, Imperial Oil was formed by 16 men who pooled the resources of seven companies to form the Imperial Oil Company, Limited, capitalized at half a million dollars.

In those days people got around on saddle horses or in coaches and buggies in summer, and cutters in winter. The roads were dreadful, what roads there were. There were a number of short railways in eastern Canada, but no CPR. John A. Macdonald was prime minister and Canada was 13 years old. Sailing ships travelled the Great Lakes, as well as a few side-wheelers in protected waters. Toronto had 96,000 people; Winnipeg had 8,000.

Some of the people of the time thought those 16 men in London were foolhardy gamblers, but it turned out that they were just what the faltering oil industry needed. Their pooled resources made Imperial the biggest oil company of the time, and its size enabled it to follow practices in buying, refining and marketing oil products that helped to bring stability to a wildly fluctuating industry. Within a year Imperial was selling petroleum products out of its own office in Winnipeg and through agents in Montreal. Imperial got to British Columbia before the CPR did, and the company opened an office in Halifax before the 20th century began.

**T**he creation of Imperial seems to have been one of those events that happened in just the right way at just the right time. It was big enough to bring order to a situation that was all but chaotic from gross overproduction, imaginative enough to foresee the possibilities of growth as the country expanded, and sufficiently vigorous and enterprising to go after the business it saw available. It survived the declining oil production from Ontario fields – the same fields whose overproduction led to the formation of the company in the first place – and was soon refining more foreign crude than domestic. It provided steady employment, paid good wages, and began building a reputation for integrity and enterprise. It even hired a man to develop a way to treat the sulfurous, evil-smelling Ontario crude so that it could compete with the sweet oil from Pennsylvania. The man was Herman Frasch and

he completed the assignment successfully in 1895.

Imperial hired its first full-time chemical researcher 29 years later, when it started Canada's first oil company research facility in 1924. It's still the biggest, with laboratories in Sarnia and Calgary. At first the research department aimed only at improving the processes then used, but it gradually developed new processes, some of which spread to refineries throughout the world. It was Imperial's laboratory in Sarnia, for example, that developed the phenol process for treating non-premium crude stocks to extract premium lubricating oils. The process is used world-wide now.

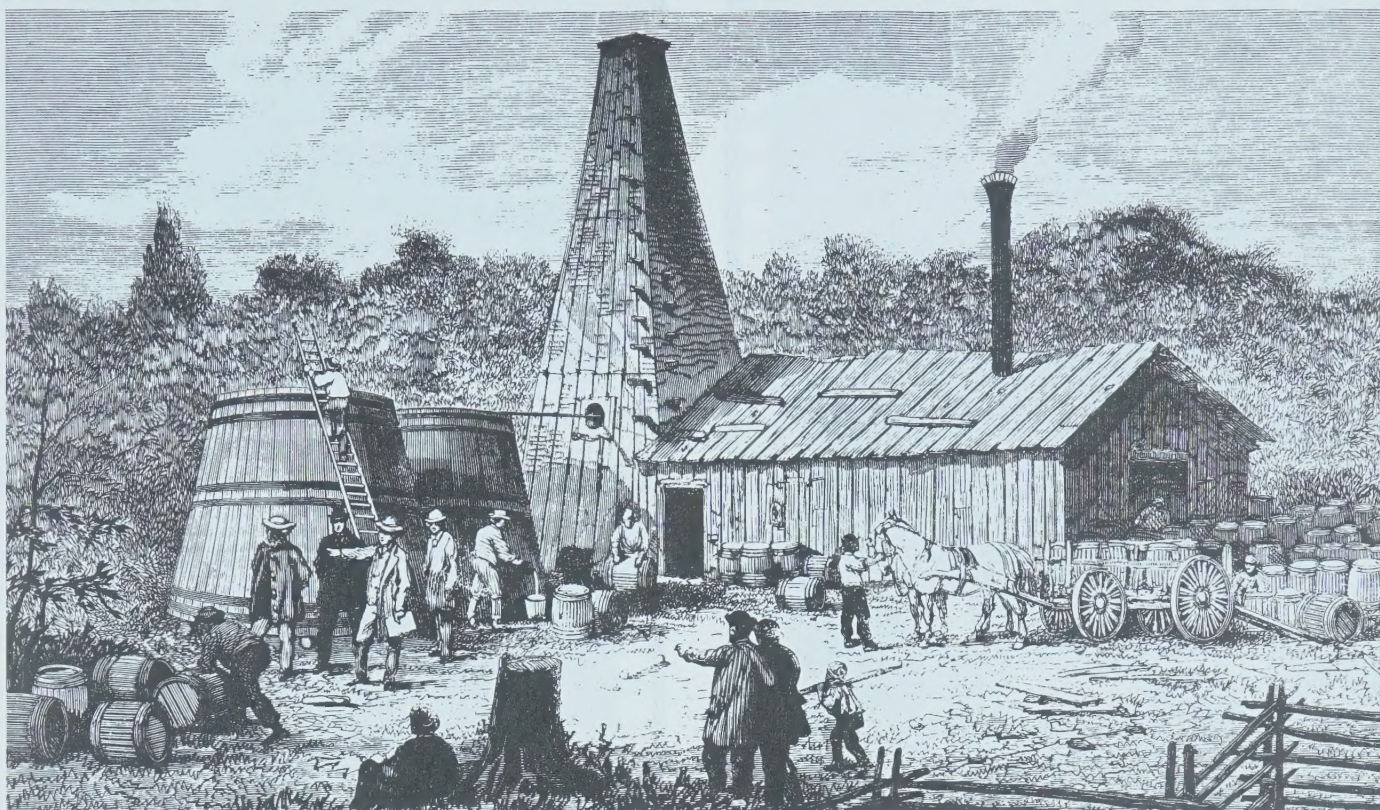
The Sarnia lab also created an additive that keeps furnace fuel oil flowing in winter. Without the additive, the stuff turns to jelly in cold weather and can't be handled by pumps. With the additive – it's known as a pour point depressant – the oil runs freely. The additive is sold throughout the world, and manufactured now in both the United States and Europe as well as in Sarnia.

The lab's 265 people work constantly to develop new products for existing uses, but they also work in advance, so to speak, creating oils and greases that permit the development of machines that could not operate on older products. For example, Imperial's Sarnia lab developed a diesel lubricating oil five years ago that lasts three times as long as the railroads hoped it would last, and two of every three Canadian diesel locomotives now use it. But today, among all the other projects at the lab, work is going forward on advanced diesel lubricants that will meet the anticipated requirements of locomotives that haven't even been designed yet.

The chemists, engineers and technicians of the oil industry have long since transformed it from a time-consuming stop-and-go process that required refinery vessels to be emptied and cleaned before they could be re-charged with another batch, to a virtually automatic process that handles immense volumes of petroleum in a continuous stream. They have developed ways to transform low-quality hydrocarbons into new and desirable compounds – virtually changing sows' ears into silk purses.

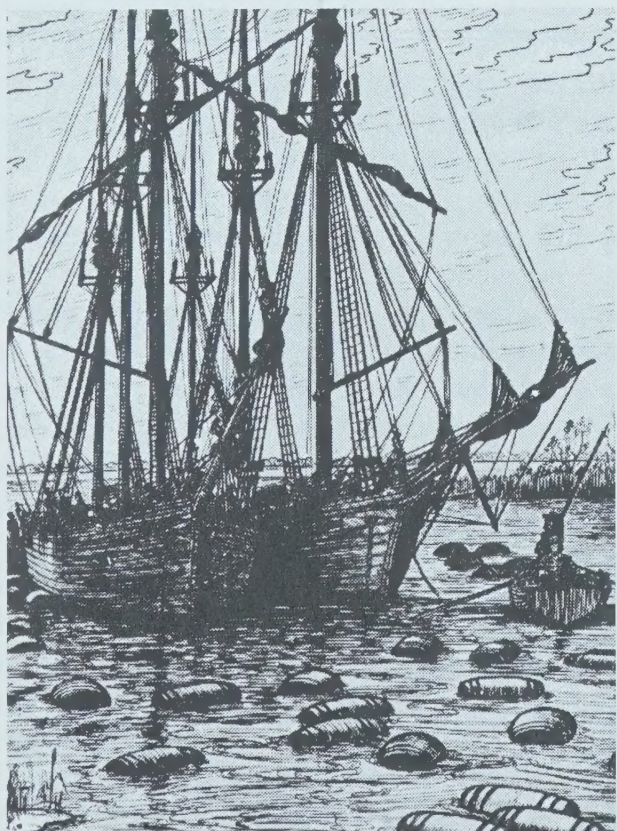
And partly as a result, the oil industry doesn't have much in the way of sow's ears any more. A refinery is virtually a closed system – you pump crude oil into one end and take petroleum products or petrochemical feedstocks out the other. The products can be dangerous if they are improperly handled, and that is another reason the system is closed – good housekeeping requires it. Consequently a modern oil refinery releases very little



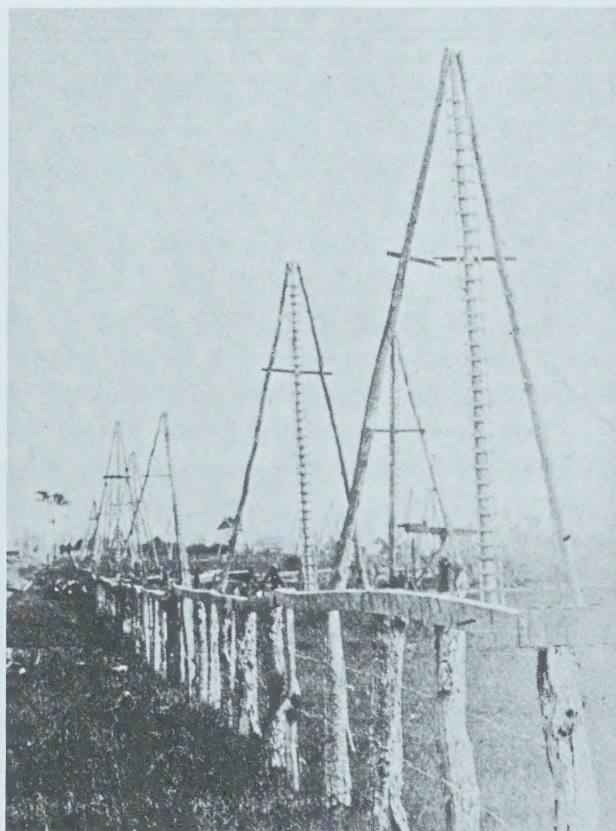


*The oil business a century ago: a well, some tanks, an elementary refinery. The artist probably never saw it*

Imperial Oil Archives



*Barrelled oil floated down creeks to Lake St. Clair schooners*



*Early Ontario drillers sank wells wherever they found room*

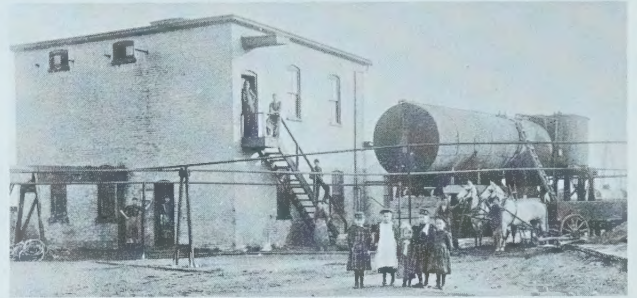




*In this 1890s treating house, sulfur was removed from kerosene*



*Imperial made its own barrels at this cooperage in Petrolia*



*Wax was recovered from oil in Petrolia's paraffin building*

Imperial Oil Archives



*Imperial moved its refinery to Sarnia in 1899 to be near water transport. This is how the place looked in 1903*



material that can contaminate watercourses.

The engineers and researchers at Sarnia also spend their time devising and improving the systems that treat these wastes, and have been doing so for years. Thirty years ago an Imperial Oil chemist named Alex McRae was a common sight on the St. Clair River. In a converted lifeboat called The Juicy Scoopy, he patrolled the river taking water samples and analyzing their phenol content. As a result of McRae's early work, Imperial pioneered the application of a biological oxidation process to reduce phenols in refinery discharges – the process uses bacteria that live on phenols, converting them to carbon dioxide and water at a design rate of 800 pounds a day. Since Imperial began its phenol-reducing program in 1953 it has cut phenol emissions by more than 90 per cent. At the same time refinery capacity has almost tripled.

In 1880 Imperial didn't even have a refinery at Sarnia. The company was formed in London – then Ontario's fourth-largest city – and its refinery was located there. The hazard in those days was fire; most refineries were fairly elementary distilling plants with open fires to boil the crude oil into fractions. There were 52 refineries in London in 1882, and fires were an almost everyday occurrence – one refinery had three within five months. Imperial's refinery was no exception; it was struck by lightning on July 11, 1883, and burned down.

The company thought of rebuilding in London, but the city council was getting pretty tired of refinery fires, and Imperial moved instead to Petrolia, which was closer to the oil fields, anyway. There they built the biggest refinery in the country; it employed 500 men and covered 65 acres. The company's operations included all the phases of the oil industry: it pumped oil from its own wells, piped or hauled it to the refinery, refined it into products, shipped the products in barrels made in its own cooperage shops from wood cut on its own wood lots. It even made its own square oil tins, complete with faucets and screw caps.

Those cans made a strong impression on the Toronto Globe, which ran a four-page article on June 24, 1893, called 'Petrolia and the Oil Industry Through the Camera'. The newspaper said the cans 'place every one in the position to have the very best oil can at a merely nominal price, which can be readily filled over and over again.'

The article was lavishly illustrated with photographs of Imperial's barn-sized jumbo agitator ('largest in America') where distilled oils were washed and blended, the 'jerker wheel' that could

pump 151 wells at once (and had an exact counterpart 'not that it is worn out, but to have in case of an accident'), the refinery looking southwest, the refinery looking *northwest*, the president of Imperial, the vice president, the vice-president's residence (now the Englehart Memorial Hospital). The whole thing looks quaint and old-fashioned, but the men are strangely contemporary-looking – bushy mustaches, long sideburns, beards.

The tins cans that so bemused the Globe reporter in 1893 were being filled over and over again throughout the world. They carried Imperial kerosene to India, China, Japan, Australia and South America, as well as to the cities of Canada from Halifax to Victoria. In that year Imperial made dozens of fuels, oils, waxes, greases and tars and had the contract to supply all the government light-houses with its Headlight burning oil, a contract it had already held for 10 years.

Canada was yet to face its greatest surge of growth when the west would open up and the settlers pour into this country through Halifax and Montreal. The country was steadily growing, nonetheless, and to meet its needs Imperial had to grow, too, or collapse before the competition of foreign marketers. The company sought, in England and Canada, the capital it needed to expand, but without success. Finally on July 1, 1898, it turned to an American firm whose offer it had rejected several years before – the Standard Oil Company. By selling a majority interest, Imperial got the capital it needed to survive and expand. The following year, On Feb. 23, 1899, Imperial took over all of Standard's Canadian assets – including the Eastern Oil Company in Nova Scotia – and became a nationwide company for the first time, with its own offices in all the populated regions of the country.

By then Imperial had moved its refinery operations to Sarnia to be near water transportation. The company bought the 300-barrel-a-day Bushnell refinery which itself was something of a venerable institution even then – it began as the Dominion Oil Co. in 1871. Imperial expanded the refinery's capacity to 900 barrels a day, making it the biggest in Canada – a distinction the refinery still holds.

The site covers more than 1,400 acres and has about 30 different processing units of varying sizes. Crude oil goes in at one end at the rate of 126,800 barrels a day, and some 800 petroleum products in a number of different grades come out the other.



In between nobody sees them, but their passage is scanned, monitored, recorded and controlled by two of the most sophisticated computers in the world, each of them worth half a million dollars. The entire plant is so flexible that it could switch production virtually overnight to meet changing market demands.

The Sarnia refinery employs 1,100 men and women, but the total employment of Imperial Oil and its subsidiaries in Ontario – not counting dealers and agents or their employees – comes to more than 8,000 people. The company has never had a work stoppage in Ontario. Ever since 1919 Imperial and most of its employees have settled their differences through a system of Joint Councils where representatives of management and labor meet to discuss policy on such matters as wages, working conditions, holidays, fringe benefits and all the other matters that come up in the workaday world.

The council concept was partly the brainchild of Mackenzie King, who was later to become Prime Minister of Canada. He worked it out with an industrial relations scholar named Clarence Hicks and applied it to settle some of the bloody skirmishes in the labor-management wars that racked the United States half a century ago.

It worked so well in the United States that Imperial adopted the idea and proposed it to the Sarnia refinery workers in an emotional meeting at the Sarnia Board of Trade building a week before Christmas in 1918. The proposal was unanimously adopted and praised in terms that brought Imperial President W. J. Hanna close to tears. It has been working ever since, the foundation of a labor-management harmony that is unparalleled in Canadian industry.

And yet when most people think of Imperial Oil, they don't think first of labor-management forums or industrial harmony. They are far more likely to think of hockey. For the lifetime of most Canadians now living, Imperial and hockey broadcasting have been synonymous. Imperial has sponsored the game ever since Nov. 9, 1936, when there were eight teams in the National Hockey League: the Toronto Maple Leafs, the Montreal Canadiens, the Montreal Maroons and the New York Americans, comprising the Canadian division; and the Detroit Red Wings, the New York Rangers, the Boston Bruins and the Chicago Black Hawks, of the American division.

Imperial hasn't always been the sponsor. For five years from 1931 to 1936 General Motors sponsored the broadcast, and when they dropped it, Imperial

was waiting to pick it up. The company has sponsored the games ever since, and its 35 years' association is a record in the annals of network broadcast advertising. During that time, Imperial has sponsored 3,635 games on radio and television. The three stars chosen at every game originated with Imperial's old 3-Star brand of gasoline. It has always been the most popular broadcast in Canada – even fans who go to the games in Toronto take transistor radios so they can follow the action.

**B**ut when a motorist is getting low on gasoline, is he likely to think of Imperial Oil in terms of hockey? Hardly. He is more likely to think of an Esso station and to see the dealer as the embodiment of Imperial. In a sense, he is, for it's at the pumps that the customer meets the company. Yet most Esso dealers – more than 60 per cent of them in Ontario – are independent businessmen who own their stations and operate them through agreements with Imperial that generally run for five years. A small number of these stations are financed with mortgages held by Imperial.

Many stations are owned by Imperial Oil, though, and operated by dealers with leases. In some cases these stations are substantial businesses that reward their operators with incomes that Imperial estimates to have gone as high as \$50,000 a year. A few outlets are direct extensions of the company; owned by Imperial Oil and operated by the employees of an Imperial subsidiary. These are the big service centres, whose investment in property, buildings and equipment are very high. There are 13 such outlets in Ontario.

The large-volume outlets are increasing in number, and the small outlets – some of them merely pumps outside a country store – are disappearing. In fact, since the early 1960s the number of Esso outlets in Ontario has dropped by more than 350 as outmoded and unprofitable outlets have been closed or consolidated into newer, more efficient stations located more conveniently for motorists. The number of outlets has gone down, and the number of automobiles and drivers has gone up, yet service has improved as new ideas in the selling of motoring products have evolved.

For motorists aren't all alike, and if you want their business you have to cater to their needs. Imperial does this with a variety of stations – there are enormous service centres with diagnostic clinics, repair services, virtual department stores of motor-





*The Imperial Cornwall delivering products to Brockville on a leafy summer day in the late 1940s*





*There are more than 1,800 Esso retail outlets in Ontario, from Pelee Island to Red Lake. This one is near Napanee*





ing accessories, and rank after rank of gas pumps, but there are also bare-bones outlets where you can't even get your oil changed.

The man who wants the full range of services isn't going to choose one of those. He wants a station where he can have his car properly serviced, and where he can pay with a credit card. But there are motorists who don't care about such things, drivers who are more interested in price than service, in varying degrees.

There is, for example, the driver who shops around for gasoline, but likes to get his windshield wiped. He needs lubricants, and he enjoys buying dressy accessories. Imperial appeals to him through its new chain of Econo stations where gasoline is a few cents cheaper, service is fast and efficient and accessories, small spare parts and household items are available. You pay in cash and there are no mechanical services.

Some people like to save a few cents on the price, but they like quick service and they want to stick with the familiar Esso name. To see if the company can increase its sales to this particular kind of buyer, Imperial is conducting an experiment with Esso self-serve stations where the driver pumps his own gasoline and can pay with his Esso card.

And there are some people to whom price is the only consideration, who will drive miles out of their way to a station selling the cheapest gasoline around. They don't care about service levels and facilities available at the outlet. Imperial wants their business, too, and has a few of the bare-bones outlets that can compete in such a market.

Gasoline marketing remains fiercely competitive, and in all the maneuvering for advantage that goes on, Imperial's marketers try to make sure that their operations serve the varied needs of all their customers. Because motorists fall into different categories, gasoline marketing experts believe that the motorist who wants service won't abandon the dealer who provides it to go to a place where none is available. Therefore, an Econo station, say, might be located in the same business area as an Esso station. The low-price station will get its customers from motorists whose interest in price alone probably keeps them away from the full-service station.

But Imperial's operations in Ontario extend far beyond the marketing of gasoline and other motor-ing products. Motor gasoline is Imperial's principal product, but if all the company's other products – industrial oils, heavy fuels, special greases, diesel fuel, farm fuels, home heating oil, aviation fuel, literally hundreds of products – are combined, they



outstrip motor gasoline sales by half as much again in Ontario. And there's more. For 14 years Imperial has been a major manufacturer of petrochemicals derived from crude oil, and its plants at Sarnia have attracted other factories that can use Imperial's chemicals in manufacturing.

Today Imperial operates 12 petrochemical plants at Sarnia with a total value of \$97 million. More than 600 people work in them, turning out 50 products in a number of grades. Last year Imperial's chemical sales reached \$92 million, and the largest portion of this amount originated in Sarnia.

**B**efore entering the petrochemical industry, Imperial had a long history of supplying refinery streams to other companies for the production of petrochemicals. Its expertise in this field was a national asset during World War II when Imperial formed a separate unit at the request of the federal government to create a synthetic rubber plant that would be able to replace the supply of natural rubber cut off by the fighting in the Pacific. When the war ended the rubber plant became the Crown-owned Polymer Corp.

Imperial's head office was still in Sarnia then, but the executive offices had been in Toronto since 1926 in an imposing building at King and Church Streets that had a covered service station at one end with an attached lounge where lady motorists could relax and write a letter. The building's cornerstone was laid on April 24, 1926, on the site of the Court House, whose own cornerstone had been laid 102 years earlier, to the day. Sharing the block with the Court House was Toronto's first jail, and in the space between the two was the gallows where Samuel Lount and Peter Matthews were hanged for their part in the 1837 rebellion. Imperial sold the building and moved to its present address in 1957, which became the company's head office in 1961. Because of the head office's height and location at the top of a plateau north of the lakefront, it was a vantage point for naturalists who used its observation gallery to make bird counts during spring and fall migrations.

Imperial's new building also created one of 1957's most appealing newspaper feature stories when a widow named Isabel Massie declined to sell her house and, for a time, blocked construction of Imperial's new building. She never did sell, and Imperial had to shift the position of its building on the restricted lot (they got a much bigger parking

lot, as a result). Mrs. Massie bore Imperial no grudge – she was polite and hospitable, but she refused to move from the house she first entered as a young bride. When she died in 1965, Imperial acquired the property.

Mrs. Massie wasn't the only neighbor affected when Imperial built its head office. Right next door is Deer Park United Church, and when it was realized that the strong winds sometimes created by a tall building would interfere with their chimneys and heating system, Imperial offered to hook the church into the new building's heating plant, and the church agreed. And ever since the building opened, its parking lot has been used by members of all the neighboring churches, a great convenience in an area where parking had always been a Sunday morning problem.

When Imperial moved in, the neighborhood was residential and fairly central in Toronto. Today there are towering new apartment buildings, smart town houses, renovated old homes and brand-new office buildings, and the centre of the city has moved miles farther north.

To many people in Ontario, Imperial Oil is best known as the operator of a fleet of lake tankers. Imperial ships have been plying the Great Lakes for generations, ever since the company bought three barges in 1899 and, a year later, a tug to tow them. In the 71 years since then Imperial's record on the lakes has never included a serious spill, and housekeeping is as strict as any country wife's: no garbage is ever dumped overboard, and oily ballasts are discharged only into shore facilities. Despite the care that is taken, minor accidents occur from time to time. The only time Imperial was ever involved with a significant oil spill on the Great Lakes occurred 20 years ago and not from a tanker. In 1951 a million gallons of heavy oil suddenly drained from a storage tank into Georgian Bay at Parry Sound. Imperial went to work on the spill immediately, containing it with booms and then scooping up the oil. The company repainted every boat touched by the oil, replaced and repaired docks of summer cottagers, hauled away contaminated beaches and replaced them with clean sand, and even steam-blasted the rocky shorelines. The cleanup cost more than a million dollars, and there is no evidence today that the spill ever happened.

Today four lake tankers carry Imperial colors on the Great Lakes, delivering products to lake ports during the shipping season from April through December. The heyday of the lakers followed the discovery of oil at Leduc, Alta., in 1947. A pipe





*With Dofasco, Imperial pioneered the use of oil in blast furnaces at Hamilton in 1960. Now Ontario uses 30 million gallons a year this way*



line was built to carry the oil to Lake Superior, and tankers took over from there, carrying it to the refineries at Sarnia. The biggest tankers of them all – the Imperial Leduc, Imperial Redwater and Imperial Woodbend, all named after new oil discoveries – were able to make the round trip from Sarnia to the pipe line terminus at Superior, Wis., in five days. Each ship carried 115,000 barrels of oil, enough to keep Imperial's Sarnia refinery supplied for less than three days.

Eventually the pipe line was extended to Sarnia, making uninterrupted deliveries of crude oil possible all year round, and the need for the vast tankers ended. But large amounts of oil products are still carried by Great Lakes tankers, although product pipe lines carry more. The pipe line that runs underground from Sarnia to Toronto operates every day of the year, transporting oil products at a steady three miles an hour come storm or cold or heat of day, delivering its contents to 10 terminals along its 243-mile length, in quantities the tankers can't match. In 1970 the pipe line carried just under 24 million barrels; the four lake ships carried a little more than 11 million. A virtual pipe line on wheels will be running through Ontario next fall when the world's first oil unit train begins delivering heavy fuel oil to the Atomic Energy of Canada heavy water plant at Douglas Point on Lake Huron. A unit train is a train that carries one substance only, and this one will carry 714,000 gallons of oil initially on every three-day round trip.

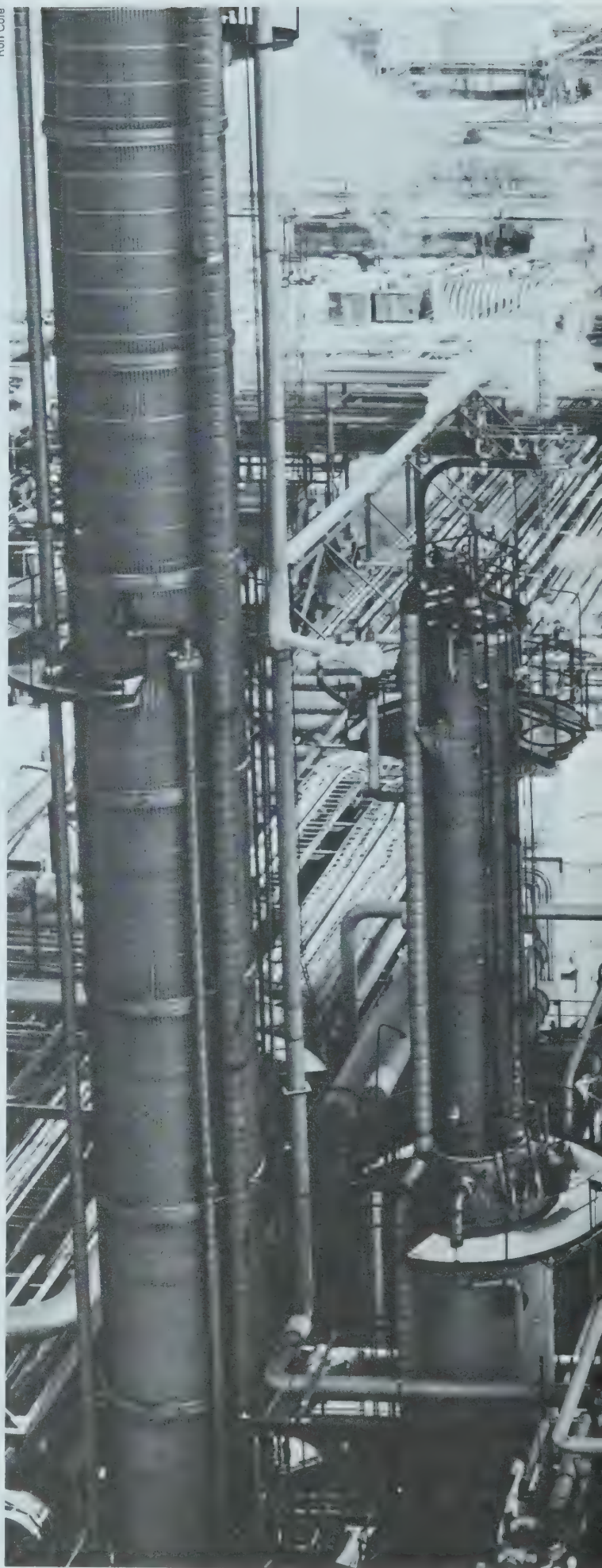
Most of the oil refined in Ontario comes from the prairie provinces, the lion's share from Alberta. Ontario still produces oil from the region where it all started so long ago, but those fields produce a corrosive crude that must be thinly diluted in the oil that comes from Alberta before it can be handled.

And even that production is dwindling. They still drill for oil in Ontario, but nobody expects to make a big discovery; Alberta is still the place for that, and the Arctic and the Atlantic shelf hold great promise.

Ontario, which once sent oil products all over the world, now cannot supply even a hundredth of its own needs. Ontario consumes oil at the rate of 371,000 barrels a day – the region's economy could not survive a day without it. Virtually every drop of that oil comes from the Prairies, and guess who brings in better than a third of it, the largest single supplier of one of Ontario's most essential substances?

Why, bless you, Imperial does.

Ron Cole







*On a winter day, wisps of steam wreath the towers of Imperial's Sarnia refinery. There has been a refinery here for 100 years*



# PARLIAMENT

Know what this venerable place does to disparate Canadians who come to visit? It turns them into patriots.

by William Cameron / photos by Freeman Patterson

In the centre of the floor of the Parliamentary Library, just behind the long wooden counter where the leather-bound books are handed out, there is a large white marble statue of Queen Victoria. The expression on the Queen's face is peculiar, mildly pessimistic, and this statue sums up something distinctly Canadian at the centre of the Parliament Buildings, it is a kind of smooth and solemn marble metaphor of the Canadian character – solid, grave, but with little absurdities hidden behind the public face.

For the statue of the Queen, which looks as though it had actually grown from the floor, in heavy regality, to give the place *substance*, came to Canada in a peculiar way. It was carved by the English sculptor Marshall Wood for 2,000 guineas – about \$40,000 today – on order from the Canadian legislators, in 1871. But the Canadian legislators were too Canadian to trust any damn fool artist with all that marble and all that money without making sure of what they were getting. They demanded that Mr. Wood come to Canada personally, and bring his statue with him, and that he hang around until everybody agreed that it was a good likeness, and respectful, and value for money. And when workmen managed to damage the right arm of the statue while hauling it around the building, the administrators put the

screws on Mr. Wood: 'It being expressly understood that in the case of the statue of the Queen . . . the right arm must be replaced in a thoroughly artistic and satisfactory manner in marble of the same quality and any other defects arising from the accident to the statue be made good . . . and that two hundred guineas be retained until the completion of the work.' (Report of the Library Committee, Commons Journals, April 14, 1871.)

Mr. Wood, no doubt, went back to London talking under his breath.



At 8:57 p.m. on the evening of Feb. 3, 1916, while the Commons was in session, fire broke out in the reading room in the Centre Block. Seven people died (two of them got out safely but went back for their coats) and almost the entire structure was lost; the Ottawa Fire Department managed to save the parliamentary library, and only managed that because the librarian on duty, displaying some gallantry, shut the massive iron doors before the flames could reach it. Senate employees rescued several paintings, the Speaker's chair, and the mace.

*The library's serene Queen Victoria*









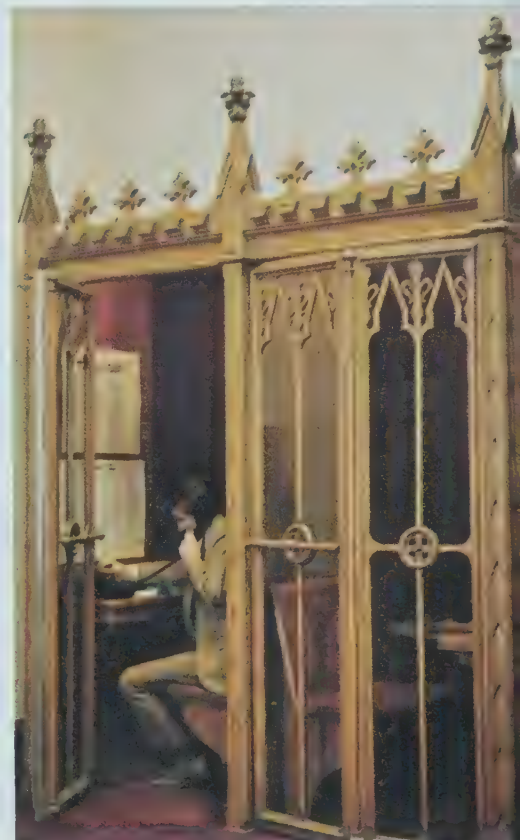


*The Peace Tower as afternoon ends*

*A huge table fills the Cabinet room*



*Bookcases once; phone booths now*





Arthur Beauchesne's *Canada's Parliament Buildings* notes: 'A Royal Commission consisting of Mr. R. A. Pringle of Cornwall, a former member of the House of Commons, and Judge D.B. MacTavish of Ottawa, was appointed to investigate into the cause of the disaster. In their first report, after taking the evidence of two score witnesses, the Commissioner's stated that there were many circumstances that led to a strong suspicion of incendiarism. However, they promised to deal with the entire subject of origin in a fuller report but no such document was ever forthcoming. Hence the cause of the fire is a mystery to this day.' The Centre Block was rebuilt by 1920, at a cost of \$10,000,000.



A young buck rising in the Liberal Party, walking past the lighted Peace Tower at night: 'I tell you, whenever I look at that thing, I get excited — there's a feeling of Canada to it, a kind of solidity, reassurance, and I feel that there is no way the country could ever really be in danger. It just looks so damn *there*.' He is a very hip young politician, but there is emotion in his voice.



That is what it is all about, and that is why the buildings are there — emotion. The buildings convey a feeling of grandeur, people walk down the marble floor of Confederation Hall past the main doors and think to themselves, this is mine. Spectators gather in Confederation Hall just before the question period, at two o'clock in the afternoon, on their way into the public gallery overlooking the House of Commons — a mixed lot, families and lovers and free-lance, unofficial political analysts — but the place is silent. No wisecracks. And as the Speaker, in his three-cornered hat, walks by in state on his way to the throne on the Commons floor, some of the people put their hands to their temples in a tentative, instinctive salute. It is not a place for cynics.



In the East Block, a civil servant with a grave voice shows a visitor the room

## Main corridor in the Centre Block

where the cabinet meets. A long, oval table, with leather chairs, and what looks like almost a throne for the prime minister. In front of each chair are two pencils, an ashtray, and a water glass. And a little schoolboy's desk off at the side for the recording secretary.

'It's interesting about this table,' says the civil servant. 'You'll notice that it originally started out round, but as the cabinet got bigger over the years, they kept having to cut it in the middle and add extra sections, and now it's gotten so big it's almost taken over the room.'

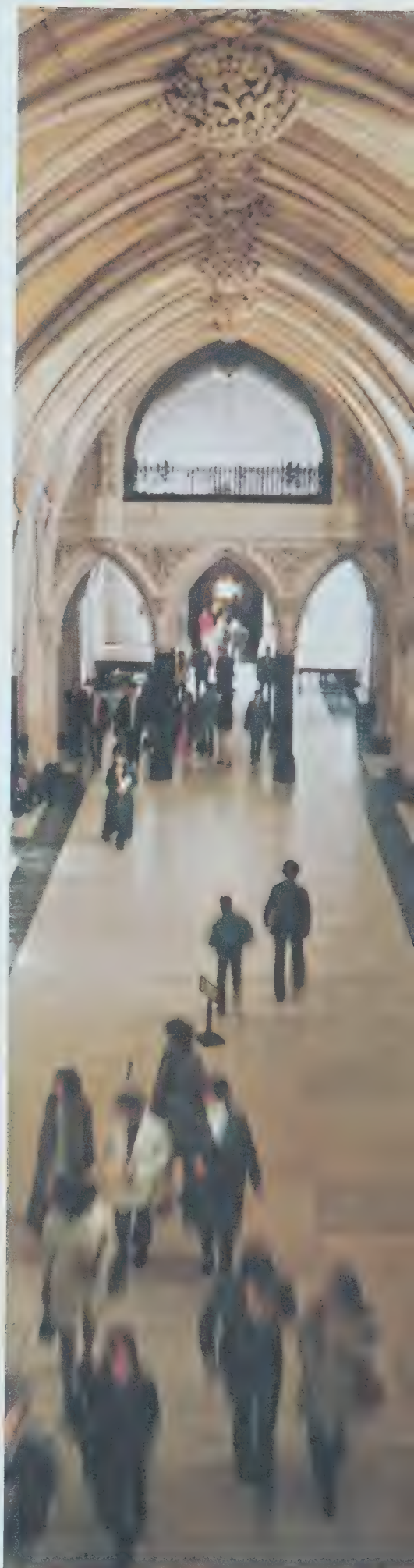
And the prime minister's East Block office, unused while Parliament is in session, but soon to come to life over the summer; a color television set in one corner, a carved walrus tusk, a delicate table, paintings from the National Gallery. 'By George,' says the civil servant, peering at a hat stand in the corner, 'I believe that's Jacobean. I declare.'



In most important executive conference rooms, the doors are covered with green baize or felt to muffle the sound; they look like pool tables stood up on hinges. In the East Block, the baize is red. And in a little room just off the cabinet chamber, where the experts sit and wait to be helpful, two old wooden bookcases have been turned into telephone booths. The march of time.



There are always children, everywhere, in swarms, staring at the portraits of the Speakers of the House, and getting in the way of the television interviewers. An elevator full of Girl Guides from Montreal, giggly in their blue uniforms, stops inside the Peace Tower for a look at the big bell of the carillon: 'That there's your big bell,' says the elevator operator. 'Ten tons. That's the one we give you to take home.' Hilarity all round. And screams as the elevator drops back down the shaft. One of them whispers to me: 'Mister, do you think they'll let us talk to Pierre?'





The commission of public works of the Province of Canada advertised in May, 1859, for architects to submit plans by August for public buildings — a Parliament building to be flanked by two departmental buildings and a residence two miles east for the Governor in Chief. For the two departmental buildings, the cost was not to exceed \$240,000 ; for the centre building, \$300,000. The structures, according to the public works notice, 'are proposed to be build in a plain, substantial style, of coarse hammer-dressed masonry ...'



When the question of placing the seat of government at Bytown was first brought up in Parliament, a history of the building quotes one of the members as saying : 'I tell you candidly you might as well send the seat of government to Labrador.'



'You may,' says the sergeant at arms to the photographer, 'take pictures anywhere but in the government lobby and the Parliamentary restaurant.' There is a distinct impression that to bring a camera into either of these two places would be sacrilege. A friend says : 'I had dinner in the Parliamentary restaurant once. Okay food. Apparently the place has weird acoustics—like, if you sit at one table, you're likely to be able to pick up a conversation at some table right across the room. So, if anybody has anything confidential to discuss, they order a couple of ham sandwiches into the office.'



The gallery, on the next-to-last day of the Commons session, is jammed and silent. Familiar and impressive-looking faces in the press gallery below : faces you see on the news every night. Beside each chair in the galleries there is a device for simultaneous translation, a long black rod with what looks like a black tin can on the end of it. The tin can delivers either English or French, depending on your



*Governors-General line a stairwell*





needs. The gallery is primarily filled with English speakers today ; when the debate turns to French, the black wands go up like grass in a high wind.



But when the politicians are gone, all the action is, too, and there is a different feeling. Standing in the centre of the floor of the Commons, by the Hansard reporters' desks, is like being in an unused church. Old, possibly irrelevant, but, well, awe-inspiring.



'When the elevator was being installed in the south wing in 1950, a solid base was needed,' a history of the East Block reports. 'In the course of excavation a tunnel was broken into, apparently leading in the direction of the Langevin Block across Wellington Street. Unfortunately, no one explored it before it was sealed. There remains the intriguing mystery of why there should be a tunnel which is not on the plans of the East Block and which has no apparent purpose. It may have joined the East Block and the first departmental building to be erected off the hill. Another theory is that it predated the building entirely, and may have led from the military buildings to a powder magazine. Perhaps no one will ever know.'



'It seems like an act of insanity to have fixed the capital of this great country away from civilization, intelligence and commercial enterprise . . .'  
(Viscount Monck, Governor General of British North America, 1865.)



A member of the Press Gallery : 'Yes I guess you could say that this was the most Canadian place in Canada. It really is a kind of distillation of the country. The system takes them all in, members of Parliament, personal staff, secretaries ; they are a very distinct type of person, and they believe absolutely in what they are doing.

'Maybe they get it from the buildings. Because, you know, you take one look at this place and you know whoever built it built it to last.'







by Alan Edmonds

# the Great Lakes

They have determined our history, our geography, even our climate. They will determine our future as well.

Rick Smith would have you believe he is a pragmatic man not much given to flights of fancy. But there was one night years ago—just a flicker of an eyelid when measured against the quantum of time we're talking about—when Captain Frederick Smith, master of the tanker Iocolite out of Sarnia, stood on the bridge in the middle of Lake Superior and gazed port and starboard on his world and thought the kind of thoughts that Conrad must have had in the Indian Ocean.

'It was a cold, frosty, incredibly clear December night and every star in the sky was out. We were heading down Superior from Thunder Bay making for Sault Ste. Marie and the canal to Huron. It was quiet and I was thinking that old Superior was in a pretty good mood that night, and then I saw the light of Whitefish Point ahead—almost 120 miles

*The last lonely laker braves Superior  
before storms end shipping in December*



ahead. I couldn't believe it at first. Then I looked around and saw the light on Passage Island at the mouth of Thunder Bay, 70 miles astern. To starboard I could see the light on Manitou Island on the American side, and that's 40 miles away, and to port there was the Michipicoten Island light 20 miles off on the Canadian side.'

Today, Captain Smith is 67, retired from the lakes to be harbormaster at Sarnia. He has an office the size of a washroom in a dilapidated dockside warehouse, and it is there, sitting at a disconcertingly tidy desk, that Rick Smith is thinking back on a lifetime of sailing what may be the best-known natural phenomenon in the world – the massive body of fresh water that sloshes around in the belly of North America.

'I don't suppose I was actually seeing the lights themselves, but rather the looming or reflection of them in the night sky. But even so, there aren't many men who've seen all four of those lights like that at one time. It isn't that clear that often.' There is a sense of awe and pride in Captain Smith's voice. 'I'm not a religious man, but I stood there and looked around at the stars, and you know, I just had to think there is a superior being somewhere. And then I thought about the early explorers and I figured that they must have had a helluva lot more nerve than I've got, sneaking up these lakes not knowing what was going to happen to them next.'

And they didn't, of course. When Champlain found Lake Ontario in 1610 he thought it was the start of a new route to China. He could not probe far into the lower lakes because of hostile Iroquois Indians, but he sent 17-year-old Etienne Brulé up the Ottawa River and across the Canadian shield to Georgian Bay and Lake Huron. In 1612, when living with Huron Indians on Georgian Bay, Brulé reached St. Mary's Falls, the barrier between lakes Huron and Superior, and he paddled down the Lake of the Illinois (now Lake Michigan).

Western man might have known more about the lakes a lot sooner if Brulé had behaved differently. But he left his own people and lived as an Indian, spied on the French for the British, who paid him with kegs of rum, and in 1632 was



*The pines that root on Huron's rocky shores  
all point eastward, obedient to the wind*











clubbed to death in a disagreement with an Indian over a girl. The Hurons ate him. But he earned a place in history as an early Canadian Kilroy, because almost everywhere early explorers of the Great Lakes went they discovered Brulé had been there first.

In fact, it wasn't until two years after Etienne Brulé was killed that another white man followed his trail. That was Jean Nicolle, who had heard of a land of men with hairless faces living in the area now known to be the upper lakes. Excited, he announced they must be Chinese, and set out in the inevitable birchbark canoe, clutching a Mandarin robe in damask fabric embroidered with poppies and birds of paradise so he would be correctly dressed when he sat down to dicker with the Chinese merchants. He did a good trade in furs with the hairless ones, who turned to be more Indians, but history doesn't record what he did with the Mandarin coat.

In retrospect, this now slightly absurd footnote to history is a demonstration of the manner in which the Great Lakes have fired the imagination of western man since Champlain. When it was satisfactorily established that they did not lead directly to China, it was thought they would at least lead straight to the Pacific and California. Seventeenth and 18th century Europe thrilled to fanciful tales of the riches that lay just beyond the sweeping horizons of the lakes – and though the first riches came from the mundane fur trade, the gold and silver and other mineral wealth was there too, to be found in another age.

What is probably the richest vein of silver ever found in the world plunges almost vertically down from a droplet of land called – fittingly – Silver Island in Lake Superior's Thunder Bay. A century ago millions of dollars worth of silver was mined there before the shaft reached 1,300 feet deep and it proved impossible to keep the lake waters out. It is said the last miner to leave, water rising fast, was able to see almost pure silver ore worth around \$300,000 in the roof of the flooding shaft. It is still there. No one has yet devised a way to keep the shaft sufficiently free of water for the ore to be mined.

Canada and the United States began as coastal enclaves in the east, but be-

cause the lakes were there Europeans were able to forge ever westward; adventurous, curious, rapacious. The Great Lakes area – by which is meant the drainage basin of 288,770 square miles stretching from just south of James Bay in the north almost to New York City in the south – is almost as big as Britain and France combined, and is one of the most heavily populated and industrialized regions on earth.

They are so vast that 'lakes' seems the wrong word for them. 'Lake' evokes images of pond-steady bodies of water you cross in a day nursing a picnic lunch, and though every schoolchild in the world knows of the Great Lakes they are, in fact, too big for a man to get his mind around. They are lakes only inasmuch as they contain fresh water. They are nothing less than inland seas. Of all the world's landlocked bodies of water, only the Caspian Sea is bigger than Lake Superior.

Superior was the last of the Great Lakes to be created at the end of the last ice age 10,000 years ago, when the glaciers that once reached down to Missouri were melting. The last glacier was the one today's scientists called the Wisconsin. As it shrank northward the earth, relieved of the weight of a blanket of ice sometimes 5,000 feet thick, began to rise again. Craggs and fissures and the wondrously grotesque land and rock formations of the Canadian shield appeared, some of them mountainous deposits of rock and earth that had been suspended in ice for centuries, others the relics of weather-born mountains perhaps 600 million years old. There was also the great rent in the land now known as the Niagara escarpment, which divides the often bleak and inhospitable Canadian shield from the gentler flatlands of the south, and there were hills and there were hollows, and the biggest of these were the tear-drop shapes of the Great Lakes into which the dying glacier fed its melting ice.

And it's still going on. One of the few places scientists have measured such things is on Lake Simcoe. There the north shore near Barrie and Orillia is still in the process of springing back faster than the south shore.

The legacy of the Wisconsin Glacier is a massive diversity of terrain, wildlife, climate and vegetation.

In Lake Superior, the lakeshores are often forbidding cliffs symbolized by Thunder Cape, the towering outcrop-

*Ontario's deep waters never freeze, but when the air is below zero the lake steams*



ping of rock that guards the entrance to Thunder Bay, site of one of Canada's oldest trading posts. From one angle Thunder Cape looks like a man sleeping on his back, his arms folded across his chest.

The coastline gentles farther south. Though northern Huron and Michigan are strewn with rocky islands that rear with astonishing suddenness out of the water, farther south toward Chicago in Lake Michigan and Sarnia in Lake Huron there are sandy beaches, and the land is more hospitable to man.

Still farther south – south of the Niagara escarpment – there is Lake Erie, where fertile fields hedge the lake and where Point Pelee, the most southerly tip of Canada juts out into the western end of the lake. Point Pelee is almost like the savannas of Georgia; white sassafras, huckleberry and black walnut trees grow there, nodding in a climate that is at times almost tropical. Standing on Point Pelee in the damp heat of summer, it is easy to appreciate that the Great Lakes not only form the major part of North America's Atlantic drainage basin, but also drain south from Lake Michigan to the Gulf of Mexico through the Chicago Ship Canal to the Illinois and Mississippi rivers.

The lakes span two of North America's climate zones which is why, when Captain Smith used to head south from Sarnia, he called it the 'steambath run.' Lakes St. Clair, Erie and Ontario are muggy and humid in summer. Again, the Niagara escarpment is the dividing line. 'I always preferred to head north to Huron, Michigan and Superior,' says Captain Smith. 'Up there the lake weather is better than air conditioning.'

To the men who sail them, each lake has a personality. Superior is a foggy, lonely lake 'gentle because she's the biggest, and slow to anger, but when aroused her storms can be vicious and long,' says lakeman Smith. At the other extreme Erie is – in Smith's words – 'quick-tempered and untrustworthy.' Because it is the shallowest lake (it is also the oldest), a sudden wind can whip its waters into violence within an hour or so – and such storms vanish just as quickly.

Great Lakes storms are legendary. Even a mild one has been known to make seasoned ocean sailors hopelessly seasick, and lake sailors say that waves 30 feet high are not remarkable. There are no accurate statistics about the num-

*Erie's shallow waters froth in sudden storms  
but its powdery beaches are wide and gentle*

bers of craft lost on the lakes, but the first storm formally and statistically recorded lasted four days and sank 97 vessels. That was in November, 1869. In the last 20 years of the 19th century the U.S. navy recorded that 5,999 vessels foundered or were wrecked in storms – and that 1,093 of them were never found. The fact that so many ships even sailed the Great Lakes 70 years ago is surprising unless one remembers that the region boomed in the Victorian era, and that before railroads were built ships were the only means of supplying settlements and carrying out the newly discovered mineral riches.

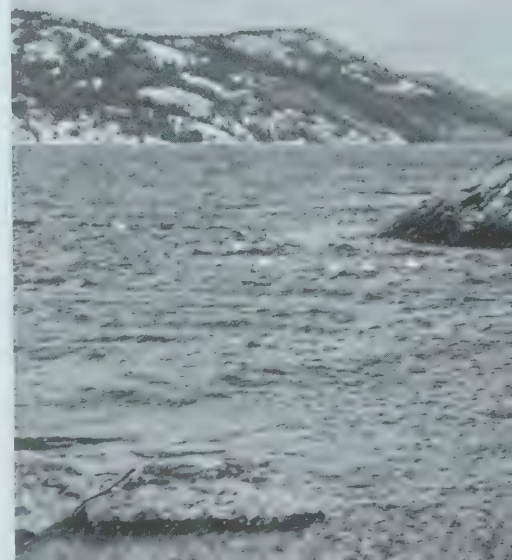
In fact, the first vessel bigger than a canoe to sail the upper lakes remains the biggest mystery ship of them all. In 1679 René-Robert Cavelier de La Salle built a 60-ton sloop on Cayuga Creek above the then-impassable Niagara Falls, and that August set sail with a crew of 34 up through Lake St. Clair and the St. Clair River to Lake Huron, and then round to the western shore of Lake Michigan, At Green Bay, now the site of Chicago. his sloop, The Griffon (or Griffin; history books disagree) was loaded with beaver pelts and La Salle sent a crew of five to sail her back to Niagara, to return with materials for a second ship.

La Salle himself remained behind with, among others, the adventurer-missionary Father Louis Hennepin who later reported: they sailed the 18th of September with a westerly wind. The ship came to anchor to the north of the Lake of the Illinois (Michigan) where she was seen by some savages, who advised our men to sail along the coast (of Huron) and not toward the middle of the lake because of the violent storms. He spurned their advice and sailed on ...

And that was the last seen of the Griffon. The mystery grew into a legend, aided in part by the name of the ship: a griffon is a mythical creature with the head, wings, and forelegs of an eagle and the body, hind legs and tail of a lion. Twenty years ago the skeletal remnants of two old wooden ships were

*Once a gauntlet for ships, Georgian Bay's  
granite islands beckon summer sailors now*

Photos: Ontario Dept. of Tourism & Information









found, one near the western tip of Manitoulin Island and one at Russell Island in the Tobermory area of Georgian Bay. Was one of them the wreck of the Griffon? Only one man expresses certainty. Orrie Vail of Tobermory has the skeletal ribs of the Russell Island wreck assembled in his museum, and a sign that says it's the wreck of the Griffon. Georgian Bay, that rock-and-shoal-littered part of Lake Huron which is somehow never regarded as such, remains a graveyard of the lakes.

Because the lakes are so big, some of the salt water sailors who began traveling them when the St. Lawrence Seaway opened in 1959 automatically assumed they would have tides. In fact the tidal action at its highest is just 1¼ inches.

One deep sea skipper to this day probably remains convinced that the lakes *are* tidal. Soon after the Seaway opened he sailed to Duluth on Lake Superior. When he left he ran aground near the harbor entrance. From Duluth, a tug company radioed: 'Do you want help?' The captain airily replied: 'No. We'll get off at high tide.'

As Captain Smith tells it, that happened in mid-afternoon. 'It seems this salt water skipper was taking a pretty lofty attitude about lake sailing, so no one bothered to point out that there were no tides. And then, damn me, if a wind didn't blow up and push the waters of Superior west toward Duluth so that by the evening the water level had risen two feet and that damn ship floated free, just as her captain said she would.'

But there are occasions when atmospheric changes and winds produce dramatic – and perilous – changes in water levels that resemble tidal waves in slow motion. Known as seiches, these 'tides' are caused by changes in barometric pressure over the lake surfaces, usually in the upper lakes, that cause a sloshing back-and-forth motion, like water in a bathtub. A seiche can cause the water to rise by as much as 10 feet in a couple of hours. Captain Smith tells of seeing a seiche in Georgian Bay lift a fishing trawler that high and leave it sitting on a jetty. On June 26, 1954, a seiche coincided with a 60 m.p.h. squall to produce an eight-foot-high, slow motion 'wave' in Lake Michigan that hit Michigan City, Indiana, at 8 a.m. The lake then sloshed back to the far shore and hit Chicago at 9:30 a.m., by which time it was in effect a 10-foot-high 'tidal

wave'. Seven people drowned.

Like mortal creatures, the Great Lakes began to die the moment they were born. They erode their own banks, spread, grow shallower, fill with silt which they create and which their rivers wash down. That is one reason why Erie, the oldest lake, is also the shallowest.

The waters that inspired early Jesuit explorers to describe the lakes as 'seas of sweet water' slowly become enriched with the chemical nutrients from the silt. The process is called eutrophication, and because of it ultimately only primitive life forms – aquatic sowbugs and other creatures that can survive on the minimal amounts of oxygen in 'enriched' water and that look like some of the more grotesque early life forms – would be able to survive. But without the works of man this death-by-natural-causes would not happen for millennia hence; perhaps the next ice age would have arrived to change the face of the earth before it could have happened.

Now it is unlikely to happen that way.

In great measure, North America is as rich and as populous as it is because the Great Lakes were there to carry the population overspill of Europe westward. Kingston, Toronto, Hamilton, Buffalo, Cleveland, Detroit, Windsor, Chicago, Thunder Bay – the great and growing cities of America and Canada are there because the Great Lakes are there.

Faced with the immensity that Captain Fred Smith glimpsed from the bridge of the Iocolite that frosty December night in the middle of Lake Superior, man thinks of himself as too puny to damage so massive a creation of nature. So today along the 1,800 navigable miles from the headwaters of Lake Superior to the islands at the mouth of the St. Lawrence River there are countless examples of man's mistaken humility in the face of natural grandeur.

Scores of towns and cities and industries dump raw or only partly purified wastes and sewage into the lakes. The sewage, the salt from the roads, fertilizer from farms, the effluent of industry – all enrich the waters in much the same way that the natural aging process would have done anyway. One river feeding Lake Erie was so fouled with industrial refuse a few years ago that it caught fire and has been officially labelled a fire hazard.

Superior, all 32,483 square miles of it,

remains relatively unscathed because there aren't many people living on or near it. But to increasing degrees as you go down to the land of the big cities and heavy industries and fertile fields, you find the lakes are all suffering in some measure from an ecological variant of the disease progeria – accelerated aging. A child born with progeria can age 70 years in 10, and die senile before graduating from grade five.

In the Great Lakes progeria has another name: man.

But the man-made version of progeria is curable. In the past decade, which some have described as the Age of Environment, man has grown uncomfortably aware of what he is doing to the world in which he lives. Both U.S. and Canadian governments have passed a flurry of legislation designed to halt the destruction of the environment and billions of dollars have been spent on sewage plants to purify the human and industrial effluent poured into waterways in general, and the Great Lakes in particular.

No one knows how long it will be before the amount of man's pollution is reduced to a level the Great Lakes can handle without being damaged. Even so, there are already signs of hope. Six years ago ecologists were saying that the western portion of Lake Erie near Windsor and Detroit was 'dead', or at least dying, as a healthy body of water. The subsequent publicity was world-wide and, alarmed, the industries and cities along Erie's shores began to purify their wastes. Today's bulletin on the health of Erie is more encouraging. The patient, say ecologists, shows signs of slight improvement.

That's encouraging news to Captain Smith, who is hard put to explain his love for the Great Lakes beyond saying: 'I just feel uncomfortable too far away from them.' He still lives near Lake Huron in Sarnia, and his summer cottage is on Georgian Bay. Often he takes a boat to sit and watch the lake, and sometimes to fish. 'When you've spent as much of your life on the lakes as I have,' he says, 'they grow to have distinct personalities and you somehow become concerned for their welfare, just as you would for an old friend.'

*When the sun shines and the breeze is right  
Lake Ontario blossoms in graceful yachts*







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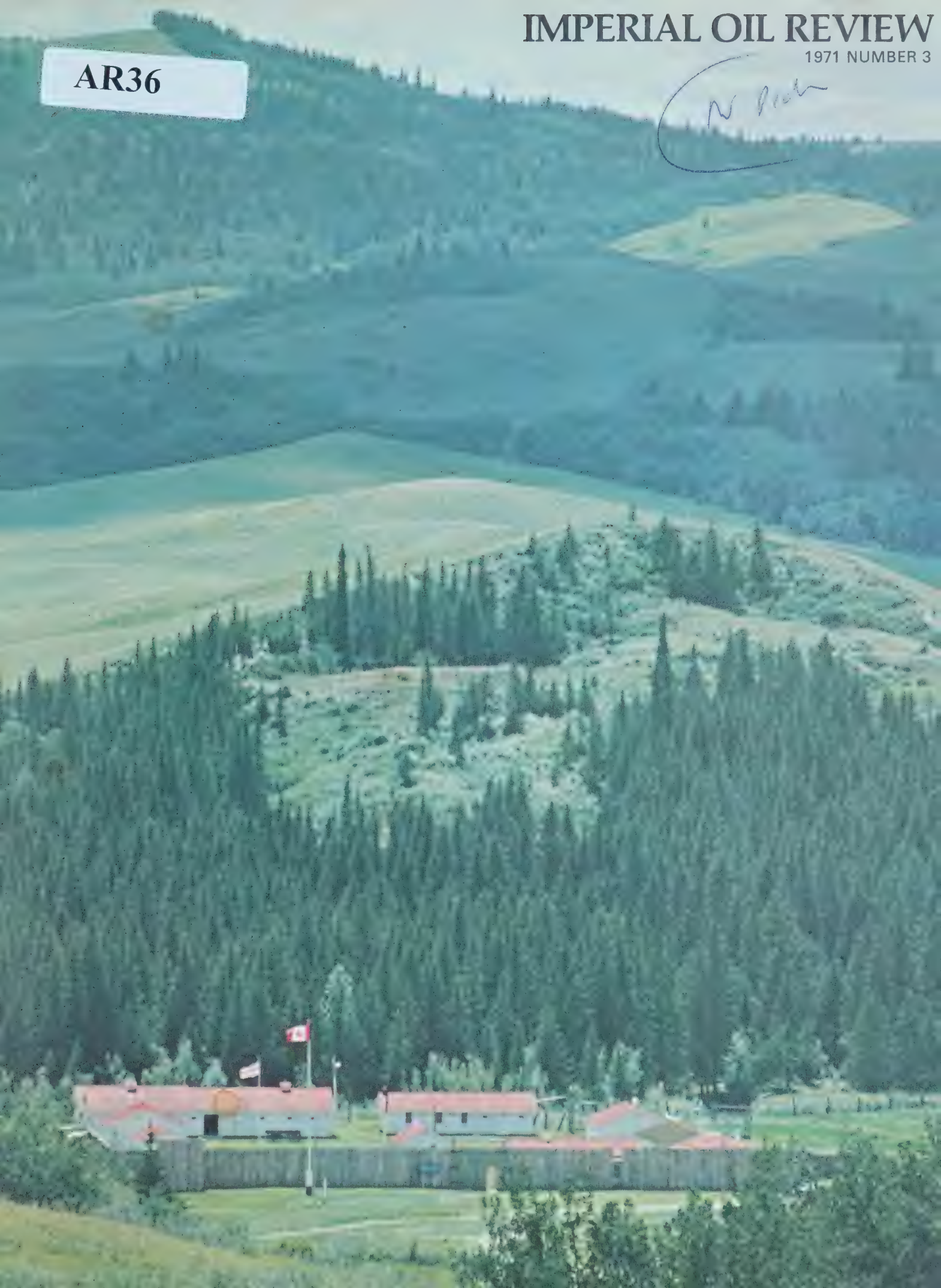
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AR36

*N. Rich*









# THE FORTS OF THE MOUNTIES

This is how the Canadian West was won  
—with decency, fairness and courage

by Grace Lane/photos by Ron Cole



A hundred years ago there was no law in western Canada. In the vast prairie grasslands between Manitoba and the Rockies there were hardly more than 30,000 people, most of them Indians living on the rapidly diminishing buffalo herds. Save for a few honest settlers and missionaries the white men were ruffians; sharp traders pushing whisky among the Indians, horse-thieves and outlaws from Montana — all the elements for an era as vicious and violent as the American Wild West.

*Barrels of salt meat and strings of traps show what Lower Fort Garry was like when NWMP recruits arrived in 1873*

Canada's story was different due in part to a band of young men who were steadfast and persevering almost beyond belief. The Canadian Mounties have become a legend, a synonym throughout the world for stamina and integrity. Scotland Yard means painstaking persistence; the FBI suggests glamorous daring; the French Sûreté personifies cool braininess, but the Mounties have a reputation based on character and justice. No police force in the world commands greater respect and admiration.

The beginning of the Force was an epic thousand-mile march across the unmarked plains by 318 scarlet-coated horsemen, none of whom had seen the territory before. Part of their

assignment was to find a gang of Montana renegades who had massacred a band of innocent Assiniboine Indians in the Cypress Hills. To those drunken horse traders, killing an Indian was sport; they murdered all but a few terrified women and left the chief's head impaled on a post. The grisly episode brought an outcry from missionaries and honest traders, and hastened the organization of the North West Mounted Police.

The Mounties' destination was Fort Whoop-Up, an enclave of notorious outlaws on the Oldman River about eight miles upstream from today's Lethbridge. Their orders were to round up the killers, suppress the whisky traffic, protect the Indians and collect



customs duties along the newly-marked international boundary.

But they did something more significant. The opening of the American West was marked by bitter and bloody Indian wars. In Canada, during the first five years of NWMP administration, not one Indian or policeman died at the hand of the other.

With a combination of integrity, courtesy and raw nerve this unique company of men upheld the law, won the respect of the Indians and made agricultural settlement possible. Their heritage is a saga that can still be read in the old forts and cairns that mark their adventures in Western Canada.



It all began at Lower Fort Garry, the Stone Fort that still stands on the west bank of the Red River, 20 miles north of Winnipeg. The fort was built by George Simpson, governor of the Hudson's Bay Company in 1831. The Big House where Simpson lived still stands; so do two stone three-storey warehouses.

It was to this fort that the first small band of recruits came on Oct. 22, 1873. Here was the real birthplace of the North West Mounted Police – here, on November 3, 1873, the Oath of Office was administered to 150 men.

Today Lower Fort Garry is a National Historic Site, restored to look as it did when the NWMP arrived. A stone wall with round bastions at each corner surrounds grounds land-

scaped in the 1850s. The Big House is furnished as it was then, and a wooden trading store erected in 1873 and razed in 1925 has been rebuilt. On its top floor there is a museum of Indian artifacts.



On June 7, 1874 the NWMP arranged in three troops of 50 men, left the Stone Fort and rode 63 miles south to Fort Dufferin, the departure point for their march west. Dufferin had been the headquarters of the International Boundary Commission, whose work was almost finished. Its buildings were habitable, and it was a convenient place for the Force to await the return of Commissioner George Arthur French, who was bringing 150 new men from Toronto.

French was a young Irishman with experience in both the Royal Irish Constabulary and the British army. He had quickly discovered that 150 men were too few for the task ahead. He asked for double the number; then recruited them himself.

The newcomers arrived on June 19 and pitched their tents near the Boundary Commission quarters. A few hours later there was a terrific thunderstorm and the horses stampeded. Troop Sergeant Sam Steele, who became superintendent in 1883, wrote: 'A thunderbolt fell . . . Terrified, the animals broke their fastenings. The six men on guard were trampled . . . the maddened beasts overturned huge wagons . . . dashed through a row of



*Fort Dufferin in 1873, a year before the newly-formed NWMP met here for their march west*







*Lower Fort Garry looked like this in 1874, full of candle molds, crockery and other trade goods*

tents. Crazed with fright, the majority were 30 to 50 miles into Dakota before compelled by sheer exhaustion to halt.' All the horses were recovered, but the Force lost several precious days.

In the late afternoon of July 8, bugles sounded and six shining divisions cantered into place. The great trek was about to begin, and French recorded the picture in his diary: ' "A" troop first on dark bay horses; "B" rode dark browns; "C" on bright chestnuts had the artillery and munitions wagons; "D" on bays and buckskins, "E" on blacks and "F" on light bays — the whole procession covered about one and a half miles.'

The going was heavy. A diary

record for July 13, the fifth day, notes: 'Marched at 5 a.m. Many delays owing to parts and wagons breaking down. Travelled till eight in the evening. Distance from Dufferin 59 mi.'

French returned to Dufferin with 'D' troop in December, leaving the other five scattered across the plains. He reported to Ottawa. 'These men gave little cause for complaint . . . working at high pressure during four months from daylight to dark. Horses failing and dying never stopped them . . . We left with the thermometer at 95 to 100 degrees, returned with the thermometer at —20 to —30 having marched 1,959 miles without a single loss of life or limb.'

Gold in a creek bed, a murder and resentful Indians were responsible for the creation of British Columbia's first NWMP post in 1887.

In 1864, hordes of prospectors, dreaming of gold, arrived at the junction of the Kootenay River and Wild Horse Creek, where a settlement called Galbraith's Ferry began. The shallow diggings were soon exhausted and most of the miners left. But some stayed on.

Kootenay Indians had ruled here for centuries and they resented the miners. For years white and red men existed in a state of tension. Two miners were murdered in 1884 and two years later a suspected Indian named



Kapula and his accomplice were jailed. The Kootenay's Chief, Isadore, afraid that his people were soon to be forced on reservations and spoiling for a fight, raided the settlement with some of his braves and released the prisoners.

The terrified settlers appealed for help, and the NWMP was sent in. Superintendent Sam Steele and 'D' troop responded, arriving on Aug. 1, 1887. Steele quickly sent for the chief and demanded the return of the two men.

'The Force has come to bring peace and fair treatment for all,' Steele told

him. 'Murder must be punished.' The impressed Isadore handed them over and the two men were charged. The evidence against them was flimsy, however, and they were acquitted.

Friendly relations were quickly established between the NWMP and the Kootenays; within weeks inter-racial hostility disappeared. A year later it was possible to close the post and a grateful citizenry renamed their village Fort Steele.

When the railway went to Cranbrook, 10 miles east, Fort Steele became a ghost town. In 1961 it became a historic site, and the town

is returning to life. There are 32 original or restored relics of the past there now, including the Fort Steele barracks, and the Perry Creek water wheel, an East Kootenay mining curiosity.



Fort Battleford, at the junction of the North Saskatchewan and Battle Rivers, was one of the hot spots of the last great frontier drama, the Riel rebellion. Superintendent James Walker built it in 1876 and for a time it was not only the Force headquarters but the seat of the Territorial

*Residents renamed Galbraith's Ferry Fort Steele after the Mounties brought order there in 1887*





Government into the bargain.

Walker's men patrolled a vast area dominated by two powerful Cree chiefs – Poundmaker and Big Bear. Poundmaker had signed a treaty with the Canadian government; Big Bear had refused. By 1879 Walker feared trouble and built a 10-foot stockade, using Indian labor.

Over the next five years unrest grew. Both Indian and Métis had good reason for discontent. Settlers were seizing land, the buffalo had gone and crops had failed.

The police repeatedly urged the government to act but nothing was

done about their advice.

The frustrated Métis turned for help to Louis Riel. Since the Red River rebellion he had been in Montana, but at the urging of Gabriel Dumont and others he came to Batoche in 1884. For a year rumors of an impending uprising flew. Finally, on March 19, 1885 Riel set up a provisional government with himself as head. Rebellion had begun!

Six days later, in an attempt to retrieve supplies cached at Duck Lake, Superintendent L. F. N. Crozier fired on the people for the first time in the NWMP's 11-year history. The

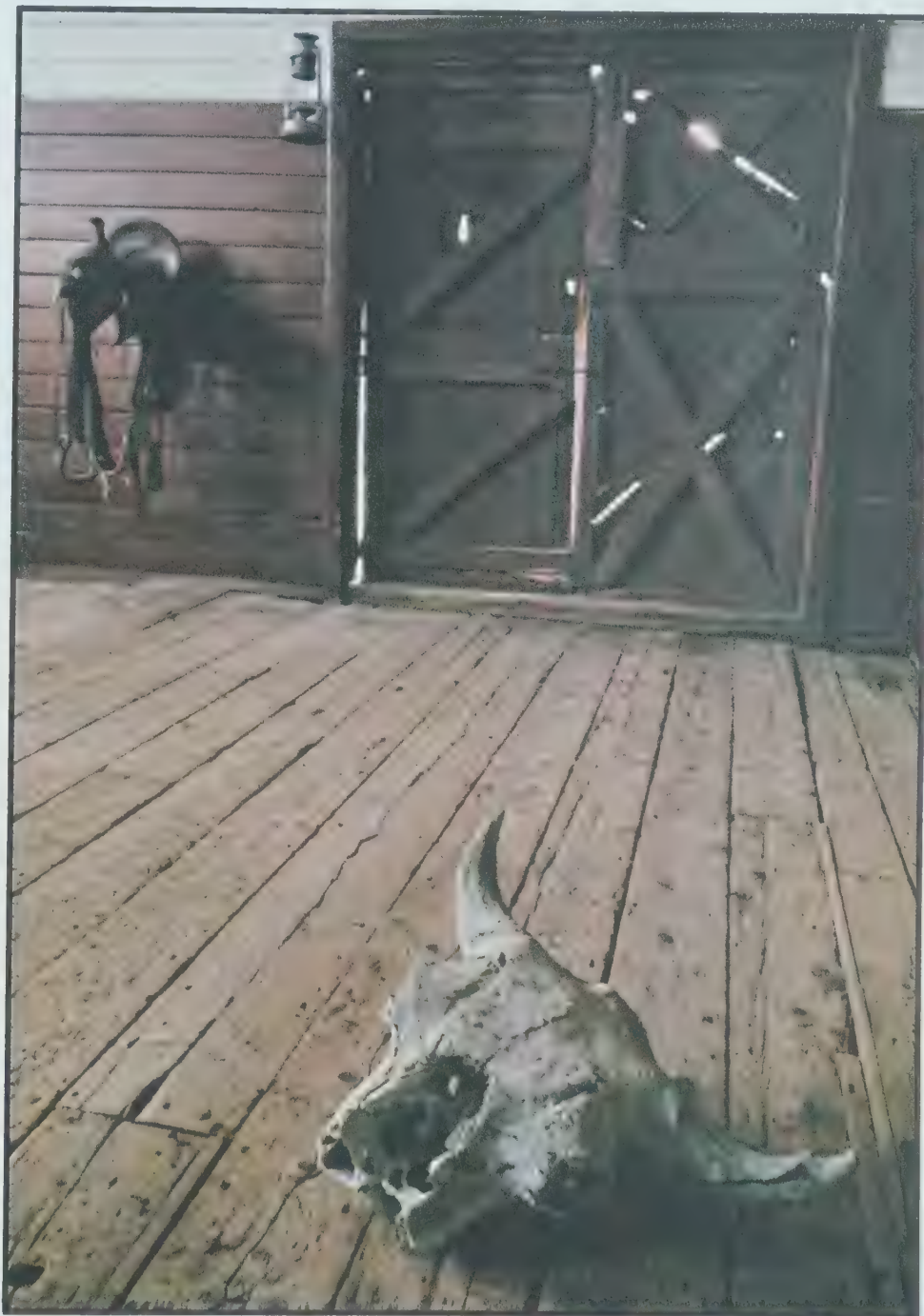
Mounties were forced to retreat and 400 terrified settlers from miles around rushed to Fort Battleford. Marauding Indians pillaged and burned Battleford town, but the fort was not attacked.

When the rebellion collapsed three months later it was at Fort Battleford that Poundmaker surrendered and was arrested.

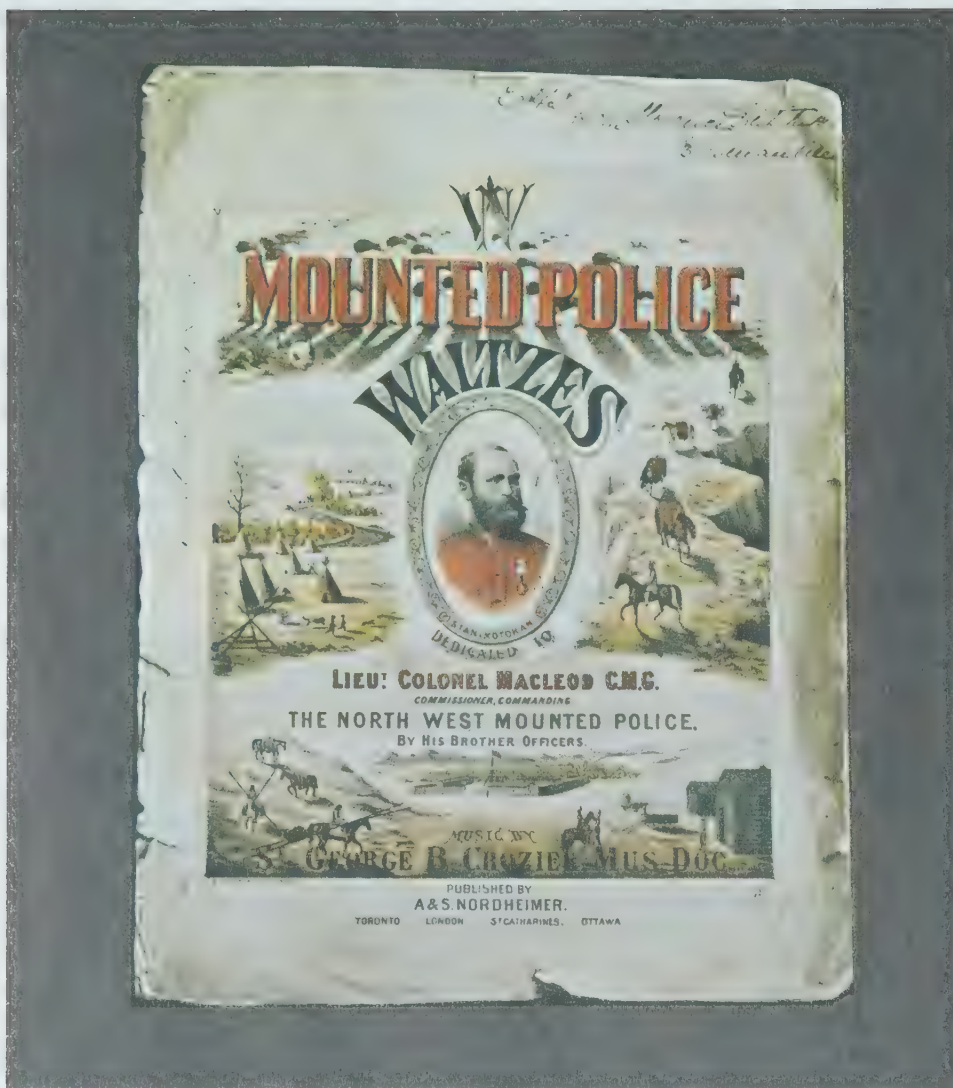
Dumont escaped to the United States but Riel gave himself up. He was imprisoned in the Mounted Police barracks in Regina and hanged there on November 16, 1885.

Dumont travelled for years with a

*Sick horses were tended in this 1898 stable at Fort Battleford*







*This music is among the exhibits in the Mountie museum in Regina*



*The church at Batoche*

Wild West show but at last he grew homesick and quietly returned to Batoche under an amnesty. He found it sadly changed. His rifle pits were grass grown and most of his friends were dead. Two years later he too died, and lies buried among his people.



On June 30, 1882 the site of the present city of Regina – then called Pile o' Bones – was chosen as the capital of the Northwest Territories. A week or so later Commissioner A. G. Irvine received orders to erect the NWMP headquarters there also.

For 38 years Regina was the base of this growing Force and it is still a major training centre. In 1920 headquarters was moved to Ottawa and the Force's name changed to Royal Canadian Mounted Police.

The building in Regina known as

'C' block has a splendid museum where the whole saga of the opening of the West is captured. The field guns, drawn over trackless prairie in 1874 are on display; so are photos of Crowfoot, Poundmaker and Big Bear. The charter enlistment roll from Stone Fort days is preserved here, and there is a large map of the fateful journey to Fort Whoop-Up. The chapel walls are lined with memorial tablets to the intrepid North West Mounted Police officers who shaped the life of the West.



'Only a poet could do justice to the site,' recorded a young constable after 'F' division pitched its tents one August day in 1875 in the angle between the Bow and the Elbow rivers, where the city of Calgary now stands.

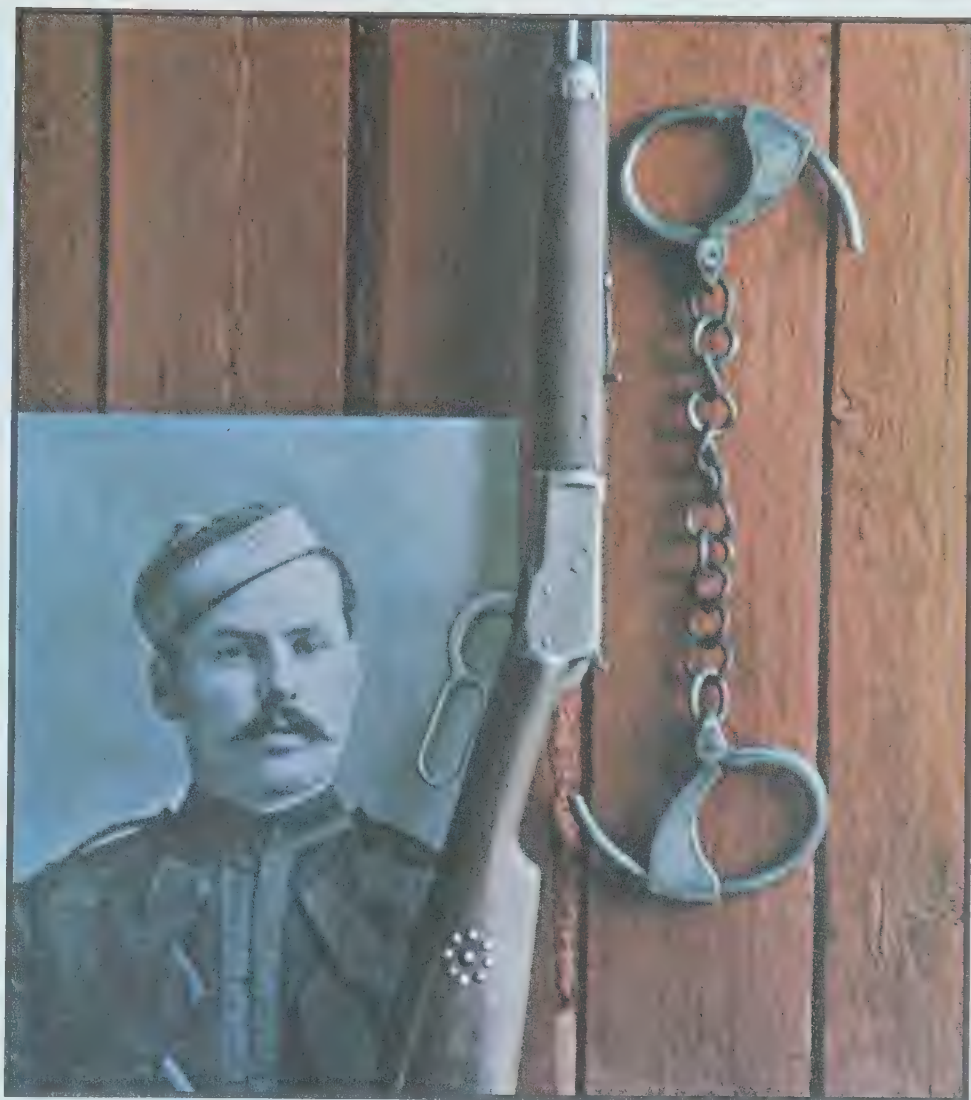
Although it began as a police post

and was named by Macleod, all that marks Fort Calgary today is a boulder at the corner of Sixth Street and Ninth Avenue SE.

One of the most exciting episodes in the police story was played out here. In 1879 the Sarcees – a branch of the Blackfoot confederacy – were destitute, as the Sioux had been at Wood Mountain. Goaded by hunger, 400 Indians descended on the fort demanding meat. The commanding officer, C. E. Denny, was away at Fort Macleod; four Mounties held the post. One rode furiously to get Denny, and the inspector and 10 police galloped back. Fortunately no blood had been shed. Denny went straight to the chief. 'Go to Macleod,' he said. 'You'll get beef there.' But the Indians stayed.

Two days later Denny delivered an ultimatum: 'Move tomorrow by this time or I'll move you,' he ordered.





*A photograph, a rifle, leg irons from Wood Mountain Post's museum*

At the specified hour Inspector Denny and a sergeant, flanked by 13 armed police, walked into the camp. The constables stood in a quiet line while Denny and his assistant calmly took down teepees. The Indians raved but Denny kept steadily on. He said nothing and no shots were fired, but slowly the Indians began to load up. By noon the entire tribe was on the march.

Only Denny's coolness and, in his own words, 'bluff and the grace of God' had prevented a massacre.



One of the most heart-breaking episodes in the history of the Canadian West took place at Wood Mountain a one-time Boundary Commission post that Commissioner French bought along with the depot, two corrals and eight tons of hay for the horses for \$100 in 1874.

Wood Mountain was in Cree and Assiniboine country but it was the Sioux who made it famous. In 1876 Chief Sitting Bull's braves from Montana annihilated Custer's army and many Indians fled north. By December, nearly 3,000 were camped near the post.

Inspector James Walsh confronted them: 'Only if they obeyed the Great White Mother's laws could they stay.' His attitude was friendly but firm and during the winter Sioux and police learned mutual respect.

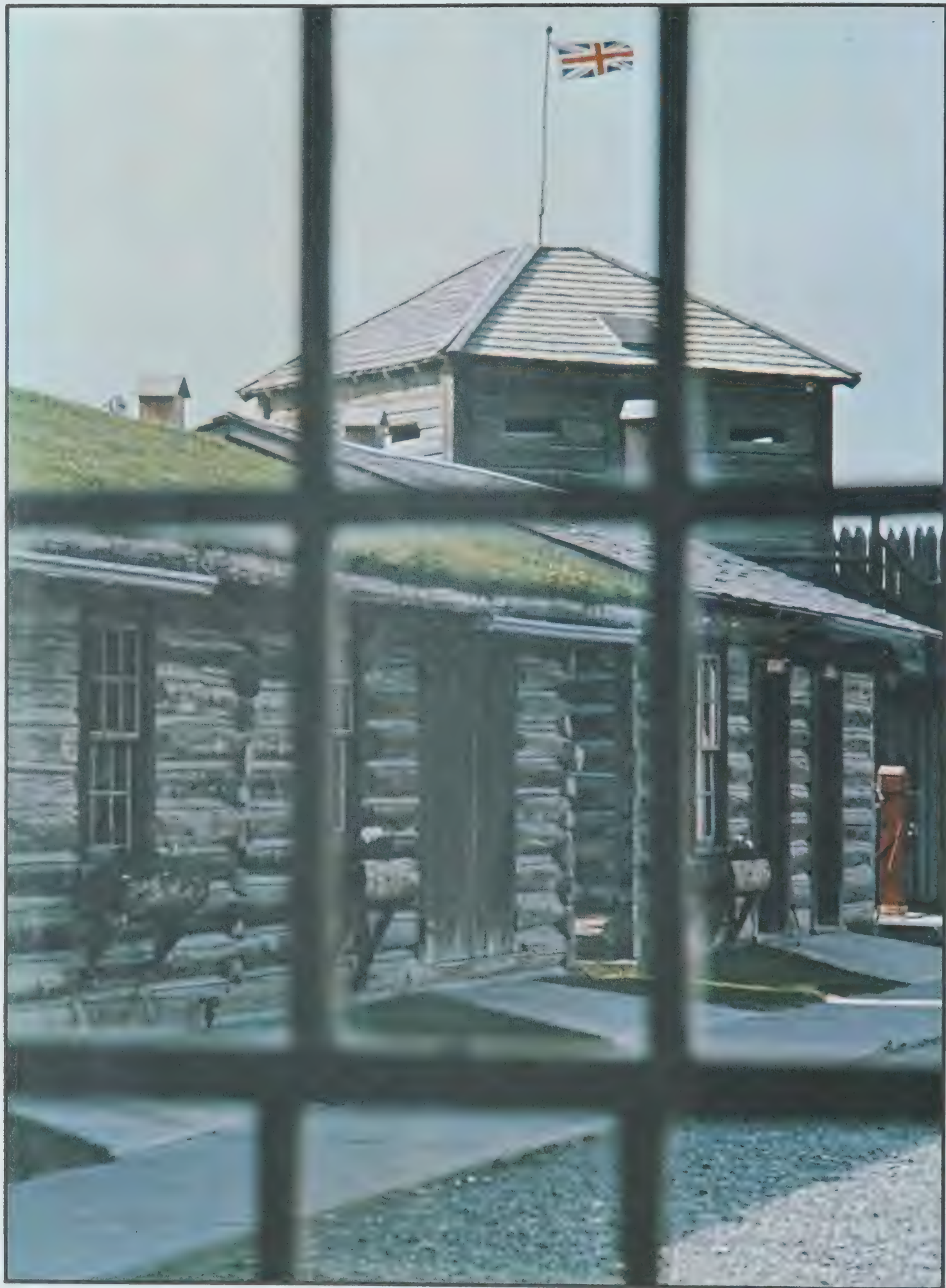
A year later Sitting Bull himself arrived with more Indians. His first encounter with Walsh was dramatic. 'Yesterday,' the chief said, 'I was fleeing from the white man, cursing them . . . The White Forehead Chief walks into my lodge alone and unarmed. He gives me the hand of peace.' That night Inspector Walsh slept peacefully in the Sioux camp.

By 1880 the buffalo had almost disappeared. Ottawa, its hands full caring for starving Crees and Assiniboines, refused to take on the Sioux. The United States had agreed to accept them back, but Sitting Bull refused to go.

The Mounties did what they could for the refugees. Walsh wrote: 'The conduct of these destitute people would reflect credit on the most civilized community.' He continually urged their return south. Finally hunger accomplished what words couldn't. A broken Sitting Bull sent this message ahead. 'Once I was strong and brave. (Now) my women are sick and my children freezing. My arrows are broken and I have thrown my warpaint to the winds.' He returned to the U.S. in 1881, became involved in another uprising and was killed in an attempted arrest in 1890.

Since 1965 Wood Mountain has







been a Saskatchewan Historic Park 26 miles southwest of Assiniboia, Sask. There are reconstructed barracks, a museum, good picnic facilities and – who knows – perhaps the ghost of a mighty chief.



The earliest of the NWMP posts is Fort Macleod, built in 1874, 33 miles northwest of Lethbridge. It is only 21 miles from the site of Whoop-Up, the destination of the Mounties' long march. Whoop-Up was reached on October 18, 1874. Assistant Commissioner J. F. Macleod ordered a cautious approach expecting a fight, but the traders had cleared out. Instead of bullets, an unkempt caretaker gave the Mounties a hearty meal.

This was Blackfoot country, a four-tribe confederacy ruled by Chief Crowfoot. Macleod's task was to enforce the law. He moved unostentatiously, establishing firm and cordial relations by consistent fair-dealing.

During the winter of 1876-77 Macleod, now commissioner, was instructed to negotiate terms for a Government-Blackfoot Treaty. It was signed Sept. 22. At the ceremonies

Crowfoot praised the Force in these words: 'If the police had not come to this country, where would we be now? Bad men and whisky were killing us. The Mounted Police have protected us as the feathers of a bird protect it from the frosts of winter. I will sign.' The treaty was significant in retaining Blackfoot loyalty during the Riel rebellion.

Today Fort Macleod is a historic showcase. Two ornamented teepees stand within the stockade and a large museum is full of Mountie lore. A carriage shed holds buckboards, travois and other old conveyances. The chapel, the smith, and dental and medical offices still stand with their original (or reproduced) equipment.



A stirring example of North West Mounted Police fortitude took place at Fort Walsh in the Cypress Hills 30 miles southwest of Maple Creek. There, 23-year-old Constable Daniel 'Peach' Davis single-handedly escorted 1,100 unwilling Crees and Assiniboines to a reservation 200 miles north of the fort.

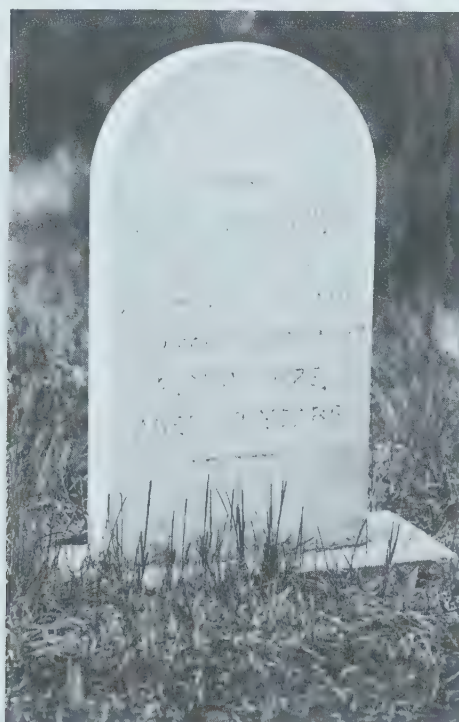
His only real assets were the Cree language and three week's food

supply. He alternately prodded and cajoled them, sustained by courage and pretended nonchalance, though he feared that one error in judgement would cost his life.

It was at Fort Walsh in 1879 that the first Mountie died violently. The victim was Marmaduke Graburn, a boy of 19. He was ambushed and murdered by a Cree Indian who had made himself obnoxious by persistent begging. A few days earlier Graburn had scolded him and this was his revenge. An Indian named Star Child was arrested and tried for the murder, and acquitted.

Graburn is buried in the little cemetery whose stones testify to the youth of NWMP personnel – none was more than 32. Captain E. Dalrymple Clark, who died of fever in 1880 shortly after he had brought his eastern bride to the post, is also here – the first Force officer lost.

Walsh is the site of the last recorded buffalo kill in 1882 and more recently was the breeding ground for RCMP horses. It sits in a sheltered valley, its stockade and several of its log buildings whitewashed and red-roofed, still intact. It is now a federal historic site.



*The Union Jack still flies over Fort Macleod, reconstructed and sod roofed. At right, the grave of the first Mountie killed on duty*



# Present on the Prairies

and Past, too. Imperial was there when  
Saskatchewan and Alberta were  
still districts of the Northwest Territories

**W**hen Louis Riel was hanged for treason at the North West Mounted Police barracks in Regina on Nov. 16, 1885, where was Imperial Oil? It was 225 miles to the north, in an office in Prince Albert, and it had been in business there for a whole year.

The passage of 86 years since then has buried any description of that Prince Albert office too deep for recall, but an even older office had opened in Winnipeg in 1881, when Imperial Oil itself was only a year old. The Winnipeg office was a single upstairs room, 14 by 18 feet, with a roll-top desk for the manager, a high desk and stool for the book-keeper, a table, a sofa, a box stove, half a cord of wood, and a pair of hip-length rubber boots for those days when the delivery wagon sank to its hubs in the spring mud.

Which is by way of saying Imperial has been a part of prairie life for 90 years, through spring floods and winter blizzards, rebellions, plagues, summer

drougths, the Great Depression, good years and bad years. It has grown from that upstairs office to an enterprise with a gross investment in plant and equipment in the region that amounts to \$711 million. It was there before Alberta and Saskatchewan became provinces, before the railroads came, before the sod-busting pioneers arrived in tides of immigration. In fact, when the pioneers *did* arrive, they found that the typical prairie pioneer outpost was a railroad siding with a grain elevator, a box-car station, and an Imperial Oil storage tank made in Sarnia and railroaded west with a shipment of oil.

By 1895 Imperial was doing a quarter of a million dollars worth of business in the Canadian West, and the complaint that has bedevilled the area ever since was beginning to be heard. 'A third of that business,' an early report stated, 'was in freight costs.'









*The car was king in Moose Jaw in 1916 and its garage was a pilastered palace, but fuel and oil deliveries were by horse*

Imperial Oil Archives



*The first well Imperial drilled in Saskatchewan was at Muddy Lake in 1919. It found only a little gas and was abandoned*

In the last century, the oil for Canada's West went in barrels and cans by ship to Fort William at the head of Lake Superior, and it all had to be there 'before the last coal', as the expression had it in the days before oil heating. From Fort William it went to Winnipeg by rail, and from there to customers on the Prairies, often by Red River cart. The cans were equipped with a spigot and the customers were expected to keep them, but the wooden barrels were something else. A deposit of \$1.25 was required on every one, but the western farmers often forfeited the deposit and kept them. When the barrels were empty the last traces of kerosene were burned out and they were cut in half for washtubs, or mounted outside as rain barrels. Before Regina got its municipal water system about 1904, residents used the empty oil barrels to cart water to their homes.

Heavy wooden barrels were used until steel barrels were introduced in 1911, in two gauges. The heavier barrels carried deposits, too, of \$8 each and were the despair of marketing managers, who couldn't convince their salesmen that the barrels had to be returned.

The salesmen had other things on their minds anyway, like where to spend the night. In 1912 the northern part of Saskatchewan was served by 10 Imperial Oil salesmen working out of a divisional





*Imperial's Winnipeg warehouse off Logan Ave. about 1916. For 30 years it served all Imperial customers west of Fort William*

Imperial Oil Archives

office in Saskatoon. A selling trip then would cover hundreds of miles over very bad roads in a horse and buggy, and could last six weeks. The salesman often spent the night rolled in a buffalo robe on the floor of a granary or, if he was lucky, in the hospitality of a lonely farmhouse.

But the market was there, and Imperial served it. In fact, it was the growth of the Prairie market, coupled with the introduction of new refining techniques, that forced Imperial Oil to seek the money it required for the expansion that had to take place if Imperial was to meet its competition. After a fruitless two-year search in Canada and England, it got the money from the Standard Oil Company, and went after Canadian sales wherever they could be found. The company opened its first bulk plant in Calgary in 1902, three years before Alberta became a province; by 1909 there were 40 distributing stations in the Prairies and British Columbia. Today there are 600 agents and other kinds of distributors, and more than 1,800 service stations serving a population of 3½ million in a region that covers 753,000 square miles.

In this vast area lies the best wheat-growing region in the world – flat, dry, fertile plains – and the Prairies are still thought of as the breadbasket of the world. But the Prairie provinces are not all prairies; fully half the region is rocky bushland,

full of lakes and tumbling rivers, and the western boundary of Alberta is the Rocky Mountains, capped with snow. The Prairie economy still turns on the price of wheat, but not everybody is a wheat farmer – or a cattleman either, although some of the ranches in Alberta are vast and their grain-fed beef is justly famous. But as you go north the fields give way to rocks and trees and the farms to mines and forest industries. In Saskatchewan, that most agricultural of provinces, the value of mineral production reached \$397 million last year – hardly a rival for agriculture's \$691 million, but not bad for a breadbasket.

In the region as a whole, agriculture accounts for only 13 per cent of the economy; the rest – something like \$10.8 billion in 1969 – comes from the other things that Prairie people do: teaching, manufacturing, mining, the tourist industry, book publishing, tax collecting, brewing and distilling, running the railroads, building dams, building homes, building big buildings.

And oil, of course.

Oil has been present in the Prairie region for literally millions of years, seeping to the surface occasionally along river banks or eroded valleys. It was known to the Indians and Eskimos before Columbus ever came to North America; it was there before man evolved as a species.





*The most spectacular wild well in Canada belched oil, mud and gas 50 feet high, caught fire and burned for five days in 1948*





Wm. Kersit Studio

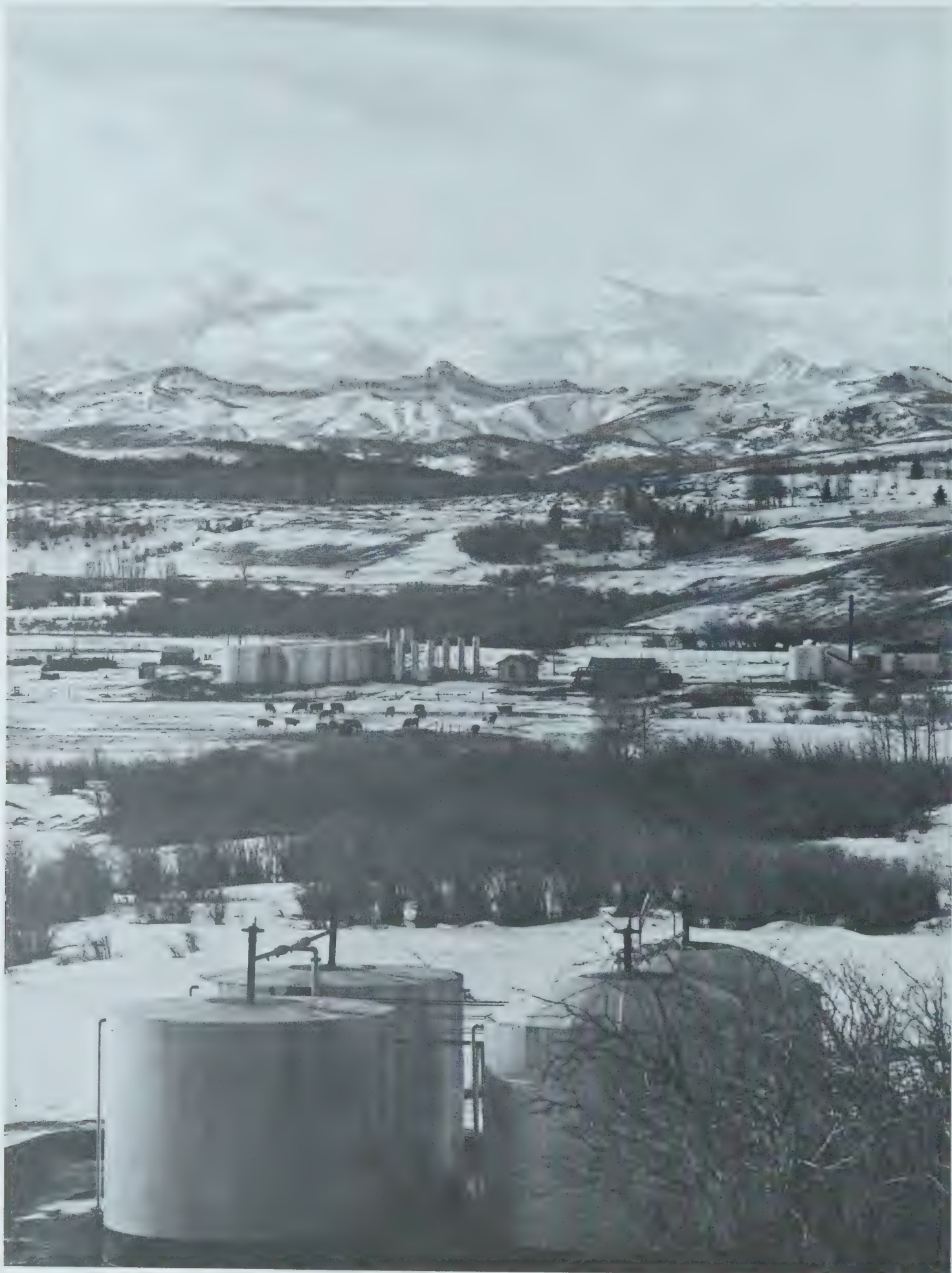
The wealth of oil and gas lying under the prairie soil was first tapped in 1883 at Alderson, 40 miles northwest of Medicine Hat, and it was the CPR that tapped it. The crew was drilling for water at the time, and hit a gas pocket. From that first haphazard strike has grown a natural gas producing industry that has extracted 14½ trillion cubic feet of gas out of proved reserves that stood at the end of 1970 at almost 67.5 trillion cubic feet – enough remaining to last at the 1969 rates of consumption for more than 29 years.

The region's first liquid hydrocarbon came from a gas well in the Turner Valley, drilled to a depth of 2,700 feet on May 14, 1914. The gas was saturated with a light, straw-colored naphtha that the cars of the day could operate on, and did. The Canadian Geographical Journal quotes a newspaper story of the day reporting that a car got 41 miles to the gallon on the stuff 'and went up the hills like a shot, exhibiting the great energy contained in the crude gasoline taken directly from the well.'

The well, known as Dingman No. 1 after an Ontario driller named Archibald Wayne Dingman, set off a feverish speculation in oil shares in Calgary, but little or no drilling. The boom collapsed in August due, historians believe, to a combination of investor timidity (it cost more to drill a well than most speculators realized – it still does) and to the beginning of World War I. The Dingman well and a few others continued to operate, extracting the naphtha and burning off the natural gas – there was no market for the gas and no way then known to store it. Later, in the 1920s, more wells were drilled to tap the gas in the valley for its naphtha, by drillers who were unaware of a large reservoir of oil beneath it. That oil was found in 1936 at 8,300 feet but by then so much of the gas above it had been flared – some estimates put it at a trillion cubic feet, worth about \$1 billion – that the energy needed to produce the oil was lost. As a result, only about 130 million barrels of the billion in place have been recovered to date.

Even if the gas had not been burned off, all the oil in the reservoir could not have been taken out. The nature of oil and the conditions of the rock in which it is found combine to make it impossible to recover all the petroleum in any deposit, at least with present technology. Oil doesn't lie in pools underground, like water in a pond; a 'pool' of oil is really a region of packed sand or porous rock, with the oil filling the spaces between the sand grains or the pores in the rock. No matter how hard





*Alberta's Turner Valley field was found twice: first a gas field in 1914, then an oil field below the gas in 1936*



you try to get it all, some is bound to remain behind, stuck to the grains of sand or smeared in a thin film on the pore walls. In some cases you are doing well to recover one barrel for every 10 in place, although one reservoir in Canada – the Redwater field in Alberta – is expected to produce, unassisted 60 per cent of the oil in the reservoir.

Redwater's recovery is high. A more characteristic field is at Boundary Lake in northwestern Alberta. Its unassisted recovery level is about 12 per cent; with a waterflood to help produce the oil, the level rises to 35 per cent, which is a bit above the 31 per cent average recovery level for the Canadian oil industry. In one case, however, Imperial Oil expects to recover 90 per cent of the oil in place, using a highly complicated system of flushing the reservoir with solvents to extract every possible drop.

Getting the most oil that is economically feasible to extract is an aim both governments and industry in the Prairie region agree upon, although differences may arise from time to time on the best way to accomplish it. The characteristics of oil reservoirs are as individual as the personalities of people, and you have to treat each one differently to get the most out of it. In some formations the engineers will inject natural gas to maintain reservoir pressure as the oil is withdrawn, in others they will advise flushing it out with water as Imperial is doing at Judy Creek. In a few very special cases they may suggest dissolving it in solvents, in much the same way Imperial is producing the Golden Spike formation where the company expects to recover 90 per cent of the oil. Experiments have shown that viscous oil can be thinned out with carbon dioxide to make it flow, and oils nearly as thick as asphalt can be made runny by injecting steam into the rock formation, or even by setting the formation on fire deep underground – engineers believe the force exerted by the small amount of oil that burns will drive the remaining oil out of the formation and up the wells to the surface.

Imperial has carried out some field research experiments by setting the formation on fire, and it is presently carrying on experiments with steam injection at Cold Lake, Alta., to see if the heavy oil in the deposits there can be thinned out sufficiently to get it to the surface. The installation cost \$8 million in wells and surface facilities, and a further \$800,000 to \$1 million a year to operate. If the experiments result in a production method that is commercially successful, they will provide access to a deposit of oil variously estimated to

contain from 80 to 100 billion barrels – although not all of that would be recoverable.

One of the biggest deposits of oil in the world lies locked in the Athabasca tar sands, an area covering 10,000 square miles straddling the Athabasca River, 200 miles northeast of Edmonton. Until recently its heavy oil has defied efforts at economic recovery, but the grip of the sands is slowly being pried loose: a company has been operating a plant there for three years. The project cost \$280 million to bring into commercial production, and is permitted to produce oil at the rate of 45,000 barrels a day.

Such large numbers characterize the oil industry in the Prairie region. Imperial's gross investment in property, plant and equipment in the three Prairie provinces stands at \$711 million – which is 44 per cent of Imperial's total investment in those assets in all Canada.

The activity of all the oil companies in the Prairies has resulted in the production of nearly 5 billion barrels of oil and natural gas liquids, and just over 14½ trillion cubic feet of natural gas at the end of 1970, with a cumulative value of something like \$13 billion. Even so, the Canadian oil industry has spent \$1.2 billion more on exploring for and producing oil than it has taken out. Imperial has produced a fifth of Canada's oil and gas through its 3,551 producing oil and gas wells in the region. Since Imperial first began exploring in the Prairies at Conklin, Alta., in 1917, the company has sunk 4,690 wells. If they were drilled in one spot, the hole would go about 4,000 miles deep, more than half the way to Australia.

**T**he most famous hole of recent times is the one drilled at Leduc, Alta., in February, 1947. The name means little to people who don't follow the activities of the oil industry very closely, and after 24 years perhaps little even to people who do. But Leduc was the closest town to the oil discovery that marked western Canada's sedimentary basin as an oil producing region of importance.

Imperial made the discovery, culminating a search that ranged over all three provinces, from the wheatlands of Manitoba to the Alberta foothills, under conditions that today's geologists would find intolerable.

Here's how an Imperial geologist named R. J. Forrest described it: 'The soil, which is the farmer's fortune, is the geologist's misfortune. They have had to delve down into disused mines and scramble into farmers' wells to find out what rock formations



lie underneath the surface (for) Saskatchewan lacks outcroppings of rock.' It was too much for some; geologists in those days were as temperamental as television conversationalists are today. John Ness, himself a geologist, recorded their foibles and reported that one of them, a professor from McGill University who had come west, 'set off on the Saskatchewan River at Edmonton and followed it all the way across Alberta to Saskatchewan at \$600 a month, plus expenses, mailed back his notebook and kept on going back to Montreal.'

Nevertheless, Imperial drilled 133 wells in their search, all dry, starting with the duster at Conklin, 80 miles north of Lac la Biche in 1917. The company persevered for 30 dry years and it spent \$23 million before oil was finally found in quantity at Leduc. The day that well came in was one of giddy excitement for Imperial people in the West. Preliminary tests convinced the drillers they had found a significant pool, and the company took the unheard-of step of issuing invitations – to government officials, the press, almost anybody – to a public coming-in of an oil well. Imperial figured the well could be brought in at 8 a.m.; the invitations said 1 p.m., just to be on the safe side, but the well itself had the last word. At 4 o'clock in the afternoon of Feb. 13, with the temperature at 14 degrees above zero and a brisk wind blowing, the well came in and the western oil producing industry was born.

Since that historic day, other fields have been discovered, many of them far bigger than Leduc. Curiously, the price of Imperial's shares dropped on the stock market immediately after Leduc – from a high of \$17¾ in 1946 to \$15½ in 1947. If you had bought 100 shares in 1947 for \$1,550 they would be worth \$10,000 today. Ah, hindsight! Part of the reason for the increase in its price has been the steady procession of new Prairie discoveries – the last near Boundary Lake in northwestern Alberta last year.

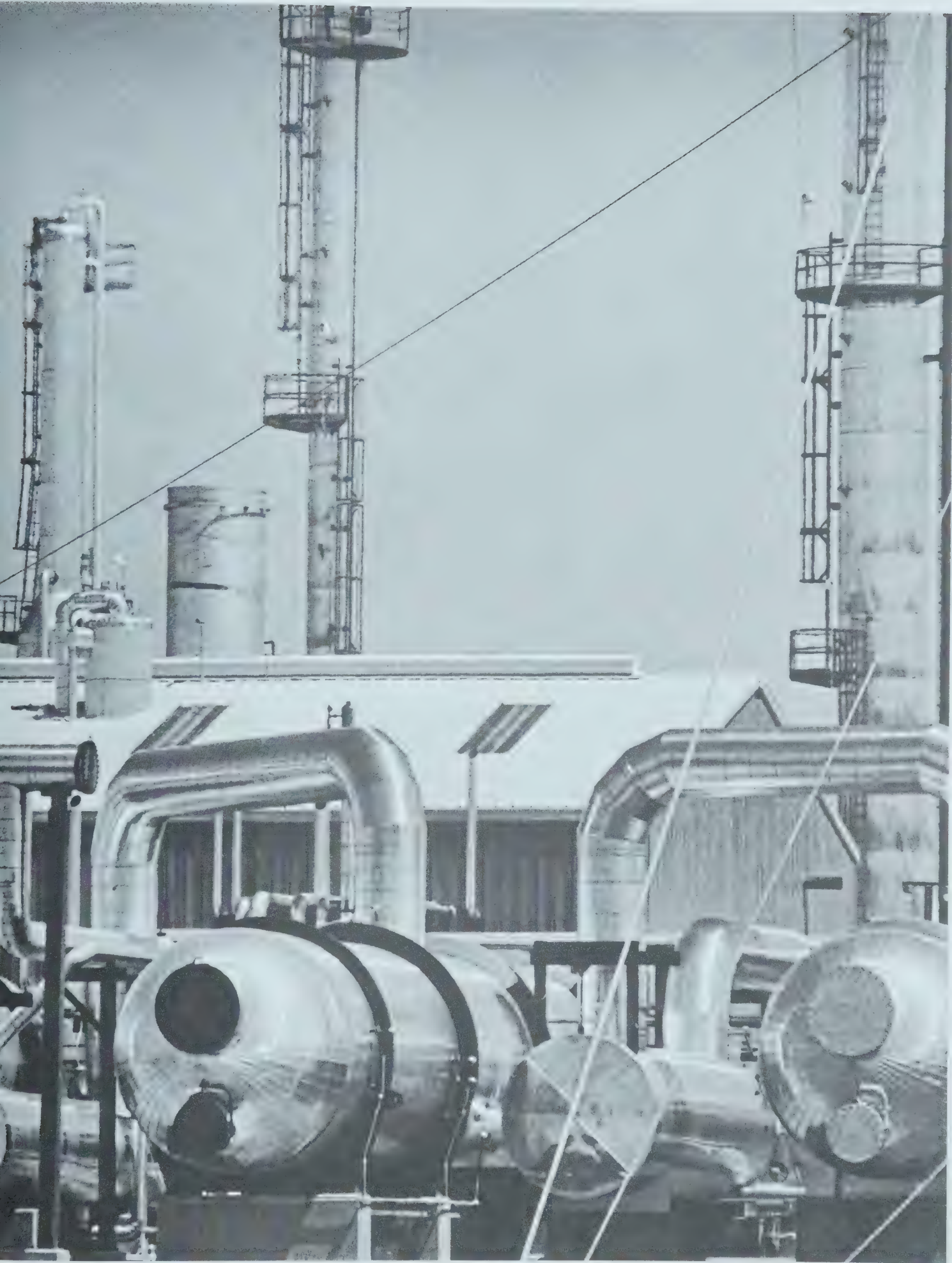
Oil pools contain natural gas as well as oil, and the gas is produced with the oil. Since Imperial's oil production is increasing, the company has undertaken an expansion of gas producing facilities in Alberta that will add 65 million cubic feet of gas to its daily production. Imperial is spending \$18 million on the facilities this year alone.

In some fields, gas is produced alone. One such field is at Quirk Creek, Alta., where Imperial has leases. The company is half owner and operator of a \$17 million plant there that removes 240 tons of sulfur from 90 million cubic feet of sour gas each

Imperial Oil Ltd.







*Glittering vessels at Quirk Creek, Alta., gas plant remove 240 tons of sulfur from 90 million cubic feet of natural gas every day*





*Lab technician monitors process that treats water from Imperial's Edmonton refinery before it is returned to the river*





Imperial Oil Ltd.

day before sending it on the gas distribution pipe lines.

Millions of cubic feet, millions of barrels, millions of dollars. What does it all mean?

Well, for Canada, it means that this country is one of the few industrialized countries in the world that is virtually self-sufficient in oil. Not that Canada doesn't import oil; it does. But the material we exported brought us more money than the imports cost us – \$200 million more in 1970 – and economists expect this amount to grow to over a billion dollars a year by 1975.

The impact of the oil industry on the Prairie provinces has been enormous, both directly and indirectly. Payments by Imperial of royalties alone last year in the Prairies came to nearly \$28 million, and the total spent on acquiring, developing and operating the company's petroleum properties came to another \$57 million. Taxes paid to and generated for the three Prairie governments were even greater – more than \$74 million.

The number of people working directly for the oil industry in the Prairies comes to something over 10,000, of which nearly 4,000 are employed by Imperial. Not very many in a labor force that numbers 1,382,000 in the three provinces, perhaps, but there's something else you can say about the oil industry. It exerts what economists call a multiplier effect; that is, for every job in the oil industry, there are roughly two other jobs created. On that basis, the oil industry gives employment to roughly 30,000 people in the Prairies, making everything from mobile living quarters for drilling crews, to the drilling rigs themselves. Some are at work in pipe mills, making pipe mainly for the trunk pipe lines, but also for the lines that gather oil at the wellheads and carry it to central distribution points. There are five pipe mills in the Prairies – one each in Edmonton, Camrose and Regina, and two in Calgary and together they can employ about 1,500 people.

The Saskatchewan potash industry is another direct offshoot of the petroleum industry. The first potash deposits were discovered in 1943 by an Imperial crew who were exploring for oil at the time. The industry will employ 7,000 people in 1975; already it sends its products all over the world. If you go to Esterhazy, you can't miss the installations over the potash deposits – they soar 240 feet above the plains.

But the evidence of the petroleum industry is harder to spot. Drilling rigs with their flimsy-looking derricks are rare – oilmen use them to drill



a well, then dismantle them and move on. When an oil field has been 'drilled up' – that is, when the number of wells necessary to produce the oil have been drilled, all you can see at the surface is a collection of valves known as a Christmas tree, or a nodding horse-head pump diligently drawing up oil. Once the drillers have gone, the land goes back to agriculture and you would hardly know they had ever been there. Even in the case of the most spectacular accident on record, the land has been reclaimed and gone back into production.

That incident began when the most horrendous wild well in the history of the Prairies blew out of control on March 8, 1948, spouting oil 150 feet into the air and heaving bubbles of mud and oil out of the ground that burst in splatters 50 feet high. The oil was driven up through cracks in the ground by the pressure of expanding natural gas. Oil spurted and gurgled up at the rate of 15,000 barrels a day, turning the 10 acres around the wild well into a greasy, green-black quagmire. What oil couldn't be held by hastily-constructed holding dikes or storage tanks was pumped back into the formation through neighboring wells.

All production in the area stopped while crews fought for three months to control the spouting well, fearing every moment that a careless spark might ignite the gas that was hissing out at 100 million cubic feet a day. In May the job of controlling the well was given to an Imperial specialist named Tip Moroney, although the well was owned by another company. Moroney and his men worked another three months and were close to winning the fight when the worst happened. Somehow a spark ignited the gas, and what had been an ugly mess became a roaring inferno that raged flame and billowed smoke more than any fire in Canada had ever done before. It brought reporters, broadcasters and cameramen from all over the world, and made the oil field at Leduc famous.

The fire raged for five days before it was choked off – and another two months passed before the wild well was sealed. It left a ghastly scar of oil-soaked earth in the 10-acre patch surrounding the well, but you can't tell that today. The scar has healed, and grain grows where the oil once bubbled up and the flames roared.

Half a century of operation on the Prairies has instilled in oilmen a sensitivity to the land as well as to the people who live on it. When drillers explore in settled areas of the region, they in-

evitably find themselves on private property, usually in a grain field. Their permits give them the right to explore, but it is the arrangements that oil companies make with the farmers for access roads, land rental and cleanup that retain their good will. Farmers receive compensation for any damage that is done by the oil men, and the land is returned to its original condition after they leave. Imperial's practice is to lease four or five acres to drill a well; after the well comes into production the company retains the lease, but the farmer uses the land, cultivating all but a small area around the well-head.

The amount spent on such compensation isn't much compared to the totals spent on exploration, but last year alone Imperial Oil paid out \$608,000 to Prairie farmers for the privilege of working on their lands.

Imperial's decades of operation on the Prairies have affected the region, but the effect has worked both ways, and the Prairies have affected Imperial. One effect has been the creation of a pair of fertilizer manufacturing plants whose primary market was expected to be the Prairie grain farmers.

The plants were built near the town of Redwater, Alta., and completed in the spring of 1969 at a cost of more than \$50 million, to supply phosphatic and nitrogenous fertilizers. Prior to their completion a chain of 398 fertilizer warehouses had been established, at a cost of another \$7 million; agents were trained in the marketing of fertilizer products, and a team of agronomists recruited to take soil samples and interpret the results of their analysis to Prairie farmers. The prospect for fertilizer sales looked good, and the industry expected to sell more than a million tons on the Prairies in 1969, the year that the Redwater plants came into production. But the world market for Prairie wheat suddenly slumped, and the market for fertilizer turned out to be only 460,000 tons. The long-term outlook was still good, but to keep the industry going until Prairie demand picked up again, more fertilizer had to be exported than the marketers had counted on. Now, Prairie demand for fertilizer is rising – the industry sold more than 600,000 tons in the fertilizer year that ended June 30 this year, and hopes to sell something like 700,000 tons by next June.

It may seem a far cry from kerosene in wooden barrels to fertilizer in kraft paper bags, but for Imperial on the Prairies it's just a new chapter in an old story: recognizing a market and working to serve it.



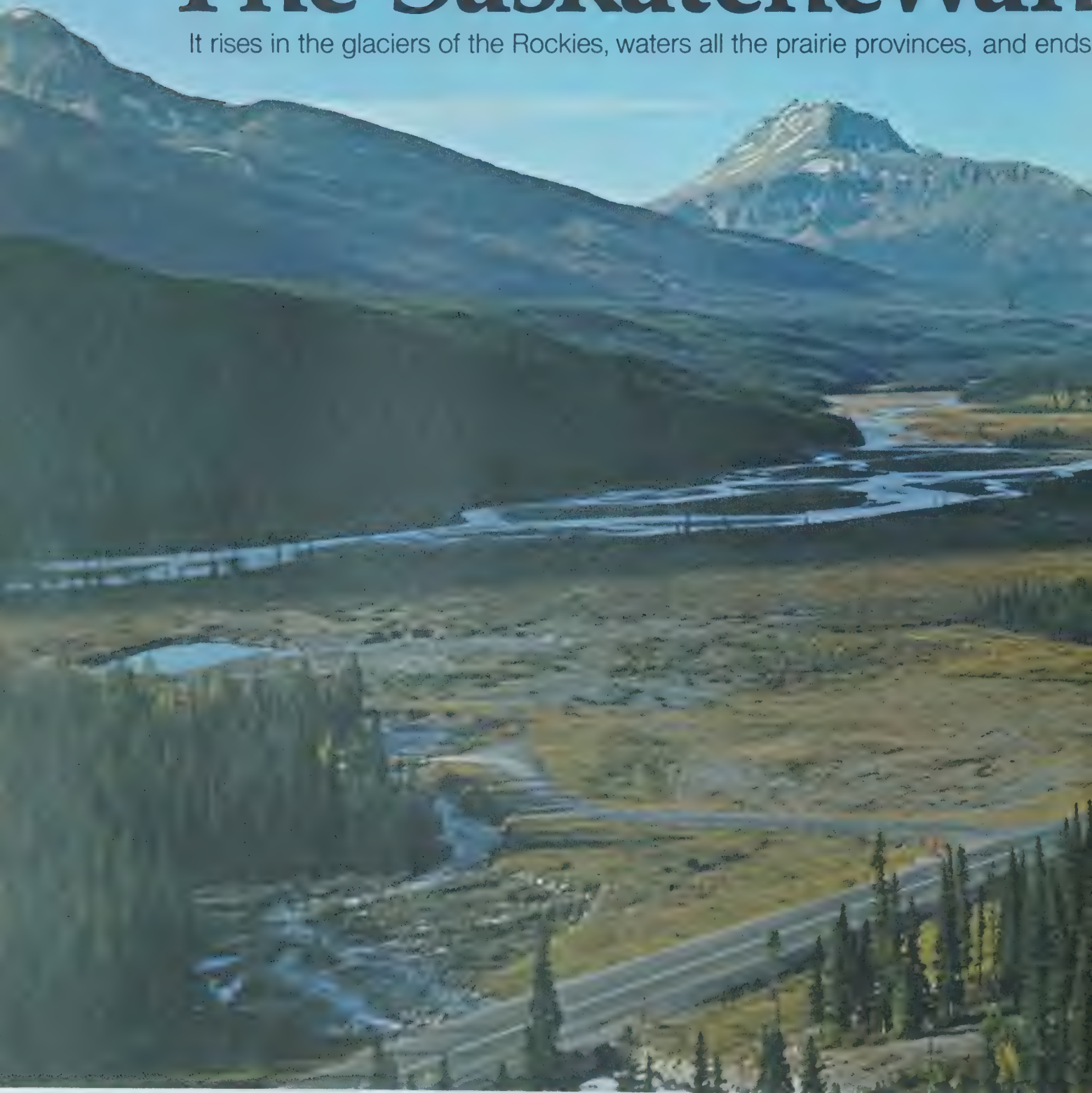


*Fertilizer plants built by Imperial at Redwater in 1969 can produce half a million tons of fertilizer a year*



# The Saskatchewan

It rises in the glaciers of the Rockies, waters all the prairie provinces, and ends



*The North Saskatchewan River, near its source at the northern end of Banff National Park, with Mount Coleman in the background*

The river's been called a lot of names in the 280 years since Henry Kelsey stood at its mouth looking west, wondering about Indian tales of the massive surge of white water before him. Many of the names were grandiose – Highway of Furs; Route to the Northwest Passage; Gateway to the West; Lifeline of the Prairies. The Crees, who rode the river

long before any white man saw it, called it Kisiskatchewan – the river that flows rapidly. That name, Gallicized and Anglicized and worn down by the tongues of countless explorers, traders, trappers and settlers, became Saskatchewan, and the name stuck.

And the Indians were right; the river does flow swiftly. The Saskatchewan is

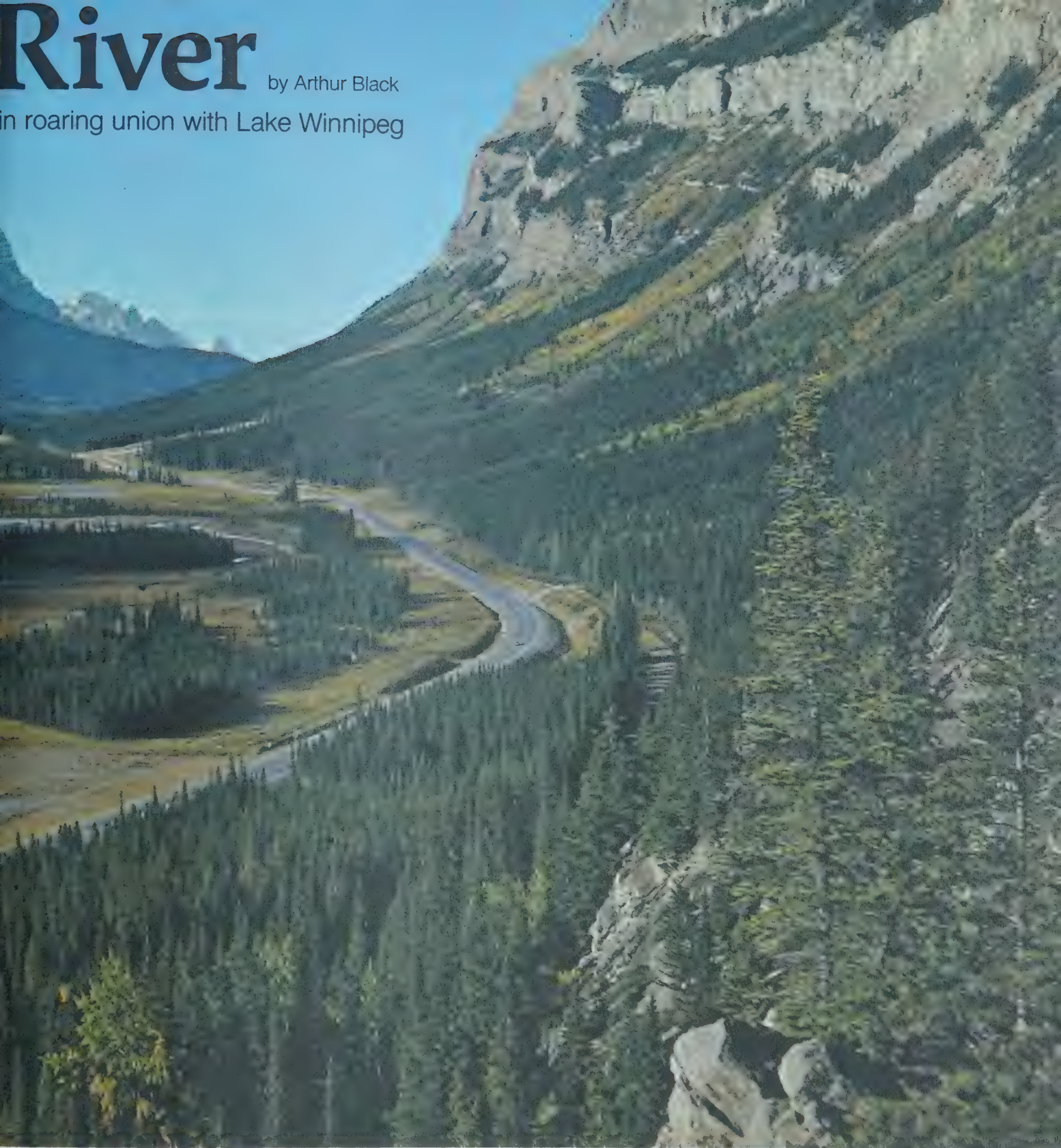
rarely more than 12 feet deep but the current is strong, punctuated frequently by shoals and rapids. During the trip from the Rockies to Lake Winnipeg, the waters of the North Saskatchewan drop more than 7,000 feet; the South Saskatchewan drops about a mile. Where the united river crosses the Manitoba-Saskatchewan border, approximately



# River

by Arthur Black

in roaring union with Lake Winnipeg



Bruno Engler Photo

18 million acre-feet of water flow past annually. That's an average of 56 million tons a day.

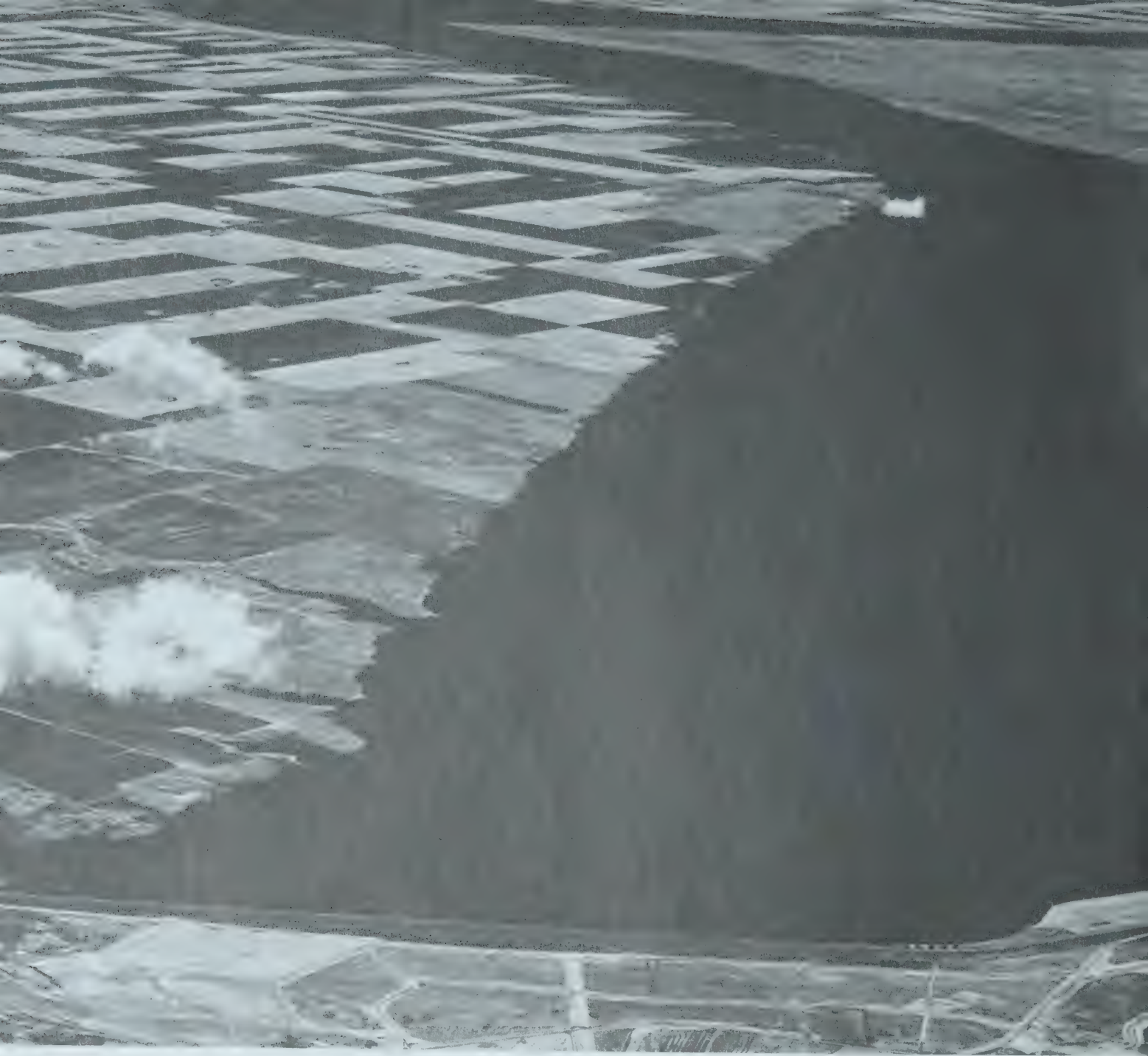
The Saskatchewan is not a single stream but gathers its waters in two main branches that have their principle sources in Banff and Jasper National Parks, high in the Eastern Rockies. The two streams then tumble across the

prairies for more than a thousand miles before they join in Saskatchewan and race down into Lake Winnipeg. Their glacial water flows through the northern end of the lake and continues as the Nelson River to Hudson Bay.

The Saskatchewan River drainage basin looks like a huge irregular funnel lying on its side. The wide mouth of the

funnel catches the runoff from the Rockies from just below the Canada-U.S. border all the way up to a point west of Edmonton. The stem of the funnel feeds into Lake Winnipeg. The North Saskatchewan is the main river and together with its lowland sister, the system drains 150,000 square miles of land including almost all of the fertile





*Gardiner Dam at Outlook, Sask., created Lake Diefenbaker, with 475 miles of shoreline and enough water to irrigate 200,000 acres*

farm land of Alberta and Saskatchewan. Except for Regina, Brandon and Winnipeg all the major cities of the Prairies are located on the Saskatchewan River or on its tributaries. Most of them began as far-flung trading posts during the fur trade. Others came into being as tiny farming settlements, homesteaded by the settlers who followed the traders and explorers. But it's safe to bet that none of them – Calgary, Edmonton, Lethbridge, Medicine Hat, Swift Current, Saskatoon, Prince Albert – would exist if the Saskatchewan hadn't been there first.

Henry Kelsey was the first white man

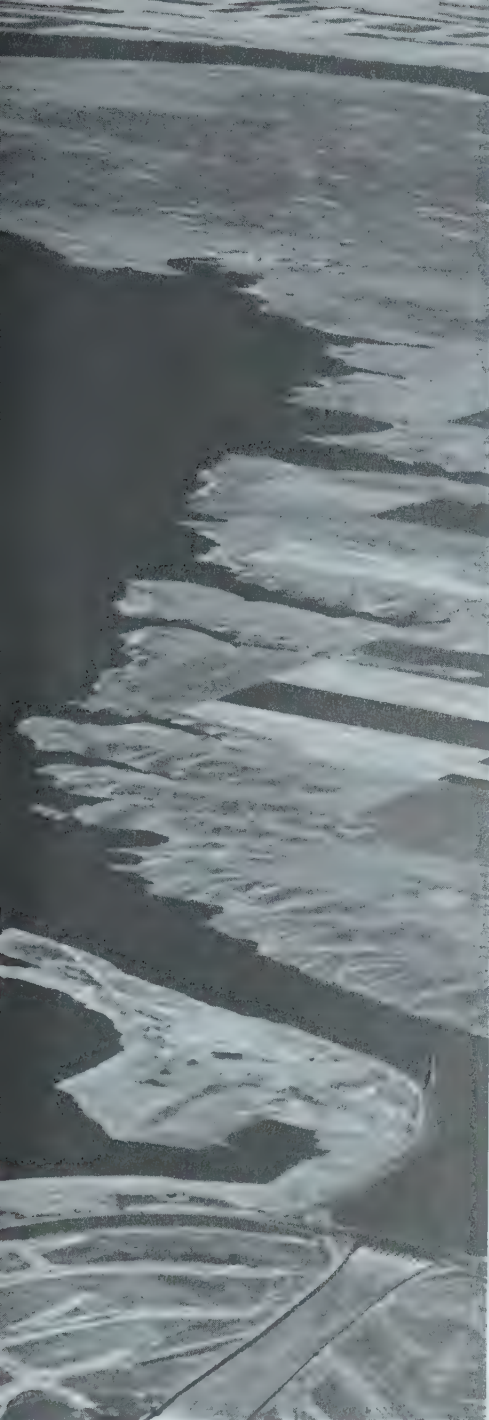
to see the Saskatchewan, back in 1691, and he reported it to his employers, the Hudson's Bay Company. Some sixty years later a French explorer and trader named Louis-Joseph La Verendrye paddled all the way up to the confluence of the north and south branches, opening the Saskatchewan River to the fur trade.

Inevitably, the search for fresh beaver country took the traders farther inland. Season after season the rival fur companies – chiefly the Hudson's Bay Company and the North West Company – established trading posts deeper and deeper inland, leapfrogging over one

another along the Saskatchewan and its tributaries. By the 1780's there were posts all the way up to the Eagle Hills, near present-day Battleford, Saskatchewan. By the beginning of the 19th century the North West Company had established Rocky Mountain House, southwest of the present city of Edmonton. For the first time, white men were living in sight of the Rockies – the source of the Saskatchewan.

During this period, rivalry between the fur trading companies became fierce and the Saskatchewan River was host to countless canoe sinkings, tent burnings and cargo thefts as agents of one com-





D.R.E.E. Photo

standably furious. What right had the Hudson's Bay Company to arrest them? "Legal proceedings" snapped Williams, "are all dam' nonsense in the Northwest." Still, Williams' brace of cannon was considered a trifle high-handed, even by fur traders' standards. The Nor'westers retaliated by kidnapping several Hudson's Bay Company personnel at the same rapids the following spring.

Squabbling on the Saskatchewan makes colorful history but it was ruinous financially for the companies involved. As the supply of beaver shrank westward, the cost of getting them became higher and higher. Such hostilities made the situation unbearable. By 1821 there was just one company left – the Hudson's Bay Company.

With the disappearance of the North West Company, the fur trade lost much of its romance. Gone were the days when canoe fleets of traders pitted themselves against their rivals, trying to get the best furs first. The French voyageurs may have looked inspiring as their canoes swept up and down the river, paddles flashing, but the canoe had its limitations. It was fragile, had a limited cargo space and required expert paddlers. And now that there was only one fur company, the canoe's biggest asset – speed – became unnecessary.

The Hudson's Bay Company was a no-nonsense enterprise more concerned with profit margins than magnificent tableaux. What it needed was a sturdier boat that could take more punishment, carry more furs and still get up and down the Saskatchewan. Company engineers studied the problem and came up with the York boat. Huge and ungainly, the York boats would hardly make anyone's pulse quicken. They were shaped like a caricature of a canoe with sharply pointed bows, a wide mid-section and a shallow draft. They were slow but they were safe. And they carried a larger cargo with less manpower than the canoe.

As the fur trade settled down the homesteaders started to come. Many of them chose to travel up the Saskatchewan because it was one of the few routes that penetrated the vast Northwest. In addition, the Hudson's Bay Company was already there, with its forts strung all along the river like havens in the wilderness. More and more York boats travelling up the river carried plows, oxen, and families of

homesteaders as well as supplies and trading goods for the fur traders.

In the late 1800's nautical romance returned to the Saskatchewan for a time. The era of steamboats came – and went. All of the steamboats used on the Saskatchewan were sternwheelers. The first one was launched in 1873, just above Grand Rapids. She struggled a grand total of 14 miles upstream before she lost the battle with the Saskatchewan current, struck a rock and sank. For the next three decades the big talk on the river was of steamboats holed, broached, grounded, beached, stuck in the ice or just plain sunk. There were still a few after the turn of the century, carrying passengers and trade goods as far west as Edmonton and Lethbridge, but most of them didn't last long – partly because of the coming of the railroad, but mostly because of the Saskatchewan. The river just wasn't meant for steamboats.

For one thing, it was frozen over for a good six months of the year. Spring brought massive ice breakups followed by floods which made navigation hazardous. By autumn the river was often so low that boats ran aground even in the main channel. Add to all that the hundreds of gravel shoals and sand banks that shifted from one trip to the next and you have a pilot's nightmare. Nowadays, people don't use the river much to get around. There are highways, railways and airlines to handle transportation. The only transport boats still in use are car ferries, which cross the river at points where traffic is too light to justify a bridge.

As the river became less important as a highway, its usefulness to industry increased in other ways. Most manufacturing operations require a large water supply and in the Canadian west, there is no better supply than the Saskatchewan River.

The petroleum industry needs water too – Imperial Oil's Edmonton refinery uses about 140 gallons for each barrel of oil produced. The refinery stands on the south bank of the North Saskatchewan River, just east of the city. It's part of an industrial area that includes a steel plant, pipeline terminals, chemical plants as well as other oil refineries.

More than two and a half million gallons of North Saskatchewan water are returned to the river daily from the Imperial refinery. All of it is treated to remove impurities and comply with

pany tried to discourage others from pursuing the beaver.

The feuding probably reached its height in 1819, when William Williams, an unusually crusty governor-in-chief of the Hudson's Bay Company, installed two cannons at the foot of Grand Rapids, where the Saskatchewan empties into Lake Winnipeg. Any North West Company canoes that tried to pass, announced Williams, would be blown right out of the water. As it turned out, the cannons were never fired; the Nor'westers decided to portage around the rapids and were arrested at gunpoint on shore. They were under-



standards set by the province of Alberta.

About 30 miles downstream are Imperial's Redwater fertilizer plants, where \$4 million have been spent on pollution control installations. Two of the plants' process units recirculate their own water, discharging none of it into the Saskatchewan. In other units the water is recycled to minimize consumption, then goes to a retention pond. There it is analyzed and treated to meet government purity standards before re-entering the river.

chewan. In 1951 an irrigation project was completed that revitalized nearly half a million acres of parched farmland around Lethbridge. But the biggest development was yet to come. In 1958 the province of Saskatchewan and the federal government got together to form the South Saskatchewan Development Project – designed to provide irrigation, hydro-electric power development, a reliable water supply and flood control as well as improved recreation facilities for the southern portion of the province.

bought these farms and resold them to farmers wanting irrigated acreage.

But most westerners welcome the results of the project. This one man-made lake has increased the useable water resources of southern Saskatchewan by 75 per cent. And there are 400,000 westerners living within 100 miles of it.

The development at Outlook is only one link in a series of projects up and down the North and South Saskatchewan – all aimed at taming the river that has had its way since the last ice age.

Hydro development projects on the Saskatchewan ran with the current – they started in the Rockies where the fast but manageable tributaries of the Saskatchewan could be harnessed and developed with relative ease. As technology advanced the engineers marched eastward with the river, damming it at favorable locations. It was inevitable that they would one day try to tame Grand Rapids where the full thrust of the 1400-mile-long river gathers to hurl itself down the final three-mile run into Lake Winnipeg. Grand Rapids is the Saskatchewan at its most terrifying. Roaring and foaming the river drops 75 feet over the three miles. Travellers have always treated this part of the river with caution. Steam boats prudently began their voyage above the Grand Rapids and even the voyageurs preferred to portage around the run.

But in June, 1964 a curious thing happened. The Grand Rapids stopped. Engineers had built a dam as part of yet another hydro-electric project and on this spring day the gates were closed and the Grand Rapids simply ceased to exist – temporarily. The ages-old roar became softer and softer. The rush of water became a stream, then a trickle, then nothing. Where Henry Kelsey had stood gaping at furious white water there were now only a few quiet pools and many flopping fish. The quiet pools held thousands of pickerel, whitefish, northern pike, goldeye, bass and sturgeon. One commercial fisherman claimed he made a \$1,400 catch that day.

But it was only a test, and the gates were opened to let the water flow through once more. Nevertheless, the point was made. From that time on the rapids would flow at the will of man, not the caprice of nature.

*At Grand Rapids the river is 500' wide and flows at 10 m.p.h. between 25' walls*



*All but three of the region's largest cities are located on the Saskatchewan River*

Other industries such as steel, chemical, pulp and paper and the potash industry need water in even greater volumes than the petroleum industry. The recent surge in development projects on the North and South Saskatchewan reflect in part an attempt by the Prairie Provinces to attract more industry.

Henry Kelsey and the traders who followed him saw the Saskatchewan as a route; the brute force of its mighty current was an obstacle. But to the engineers and scientists of the twentieth century, the abounding waters and the force of their flow was a challenge of a different kind. How could they harness the water and make it work for them?

Many schemes were talked about over the years but they were either too expensive or too complicated for a relatively limited agricultural economy to undertake. Nevertheless, by 1945 a few successful power developments were operating on the Bow and Elbow rivers – two tributaries of the South Saskat-

The showpiece of the project was completed in 1967 – a gigantic reservoir near the town of Outlook, Saskatchewan. Both the South Saskatchewan and the adjacent Qu'Appelle river were dammed to create an immense reservoir covering nearly 110,000 acres.

The combined dams impound the high spring and summer flows of the South Saskatchewan, forming a freshwater lake with a shoreline of 475 miles. The stored water is released as needed, either for irrigation or power generation – there are three hydro-electric units, each with a capacity of 62,200 kilowatts. The reservoir was designed to supply enough water to irrigate 200,000 acres. Not all the farmers in the area were overjoyed however. A few with farms in the irrigation area preferred "dry land" farming. Switching to irrigated farming meant they would have to adopt new techniques and they preferred to stick with the methods they knew. They sold their land and moved away. The provincial government







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**Cover/Ron Cole:** Fort Walsh in the Cypress Hills of southwestern Saskatchewan

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# IMPERIAL OIL REVIEW

1971 NUMBER 5

AR36









# Pacific Pioneer

Imperial products were sold  
in British Columbia before Vancouver was born

All things considered, 72 years is not a long period of time. The Bible allots man only two years less than that. Still, in the history of Canadian business, it's not a bad span. In British Columbia such corporate longevity is rare; only 18 companies (four of them jockey clubs) have been in business longer than 72 years, which is the length of time that has passed since Imperial was licensed in the province on Nov. 23, 1899.

Actually, one could make a better claim than that, and date the company's start in British Columbia to 1898 when Alex Marshall became Imperial's first salaried employee in the region. If you wanted to stretch a point you could say the beginning was in 1896, the year Imperial set up a warehouse beside the old CPR station at the foot of Granville St. The company needed a warehouse because the commission agent it had appointed in 1890, W. Smith of New Westminster, was doing such a good business. Of course, people in British Columbia knew about Imperial before W. Smith became agent; the company's products had been trickling into the province ever since 1883, coming all the way from Winnipeg.

There was no Vancouver then, of course. There was a place called Coal Harbour and a village named Granville that everybody called Gastown. Vancouver didn't come into being until April of 1886, and two months later it was obliterated in a tragic fire that in 45 minutes burned virtually every building on the site and killed a score of people, including a family who jumped into a well, then suffocated when the fire burned all the oxygen out of the air.

But the city rose on its ashes and a year later the first train from Montreal arrived in Vancouver. You can see that locomotive today – it's at Kitsilano beach.

With the railway, British Columbia's spectacular growth began. When the first train pulled into Vancouver there were only about 50,000 people in the whole province; 30 years later there were half a million, and some of them were tucked away in spots almost impossible for supplies to reach. All oil products – coal oil, candles, lubricants – were packaged in wooden cases and packed by horse and mule as far as 250 miles into remote mining camps by trains of as many as 50 animals. Here's what it





*This is how the site looked in the spring of 1914, when Imperial started to build its refinery at Ioco, 11 miles from Vancouver*

Imperial Oil Archives

was like around the turn of the century, and even later, according to Imperial's regional manager C. M. Rolston:

'Numerous accidents occur in this mode of transportation, the most common being where horses make a false step, become overbalanced, and fall down ravines and into gulches. In such cases, the packer takes his rifle and shoots the horse from the road, very rarely making any attempt to recover either the horse or his burden of freight. Losses occur also in crossing streams. The bridge, if any, usually consists of a fallen tree with the top leveled off with an axe. Often horses overbalance and fall off these bridges and are drowned; or when fording mountain streams they are carried off their feet and swept away in the current.'

**B**y 1919 the cases had been replaced by wooden barrels, and these in turn were giving way to steel. Too heavy for a horse to handle, but no trouble for a ship. Imperial began delivering its products by coastal tanker in 1916 to industries with outlets to the sea all up and down the province's spectacular coastline, and a selling trip was quite an adventure. In 1919 a salesman named F. W. Evans reported one of his trips up the coast in an 85-foot launch

that had been used previously in missionary work. His trip lasted six weeks and covered 1,200 miles.

Besides himself there were three other salesmen, an engineer and a seaman on board, and they all helped operate the launch. Evans was the cook, and he took along one of Imperial's now almost-forgotten products – an oil-fired New Perfection Cookstove and a supply of coal oil. The New Perfection was advertised as fast and smokeless, and Evans was lyrical in its praise. He took orders for stoves as well as petroleum products. At every settlement he not only booked orders, but he took in the sights as well. At Alert Bay the launch stopped long enough for Evans to witness a potlatch ceremony where, he reported, 'the leading feature is the giving away of presents by the chiefs of the different tribes. Goods to the value of thousands of dollars are distributed to the tribes, and keen competition ensues as to who shall give away most.' He also marveled at the Indian houses – enormous structures big as barns in which 10 or 12 families lived together. At another stop he trudged eight miles back into the bush to visit a camp and 'was greeted with astonishment, so rarely was a traveler seen in these parts.'

In one sense, things haven't changed much in half a century. Travelers are still seen only rarely





eight miles back in the bush from Campbell River where Evans made his sale. The Imperial Nanaimo, a bluff little coastal tanker, still travels much the same route as the missionary launch, doing much the same thing. The Nanaimo travels through spectacularly beautiful country, and although the crew sees few potlatches any more, they struggle as purposefully as F. W. Evans did 52 years ago.

For example, on her regular call at Canoe Pass near the entrance to the Portland Canal on the B.C.-Alaska border the Nanaimo must enter the harbour through a 70-foot-wide passage no earlier than an hour before high tide, discharge her cargo, then get out no later than an hour after high tide, or be grounded there. What's more, she must turn around in a bay so small and shallow that she must keep her bows touching the dock while she swings her stern in a semi-circle, or she'll run aground. With this manoeuver completed, she steams out the way she came in. The Nanaimo is 27 feet wide, and that leaves her just 21½ feet on either side of the passage. That's why it's called Canoe Pass.

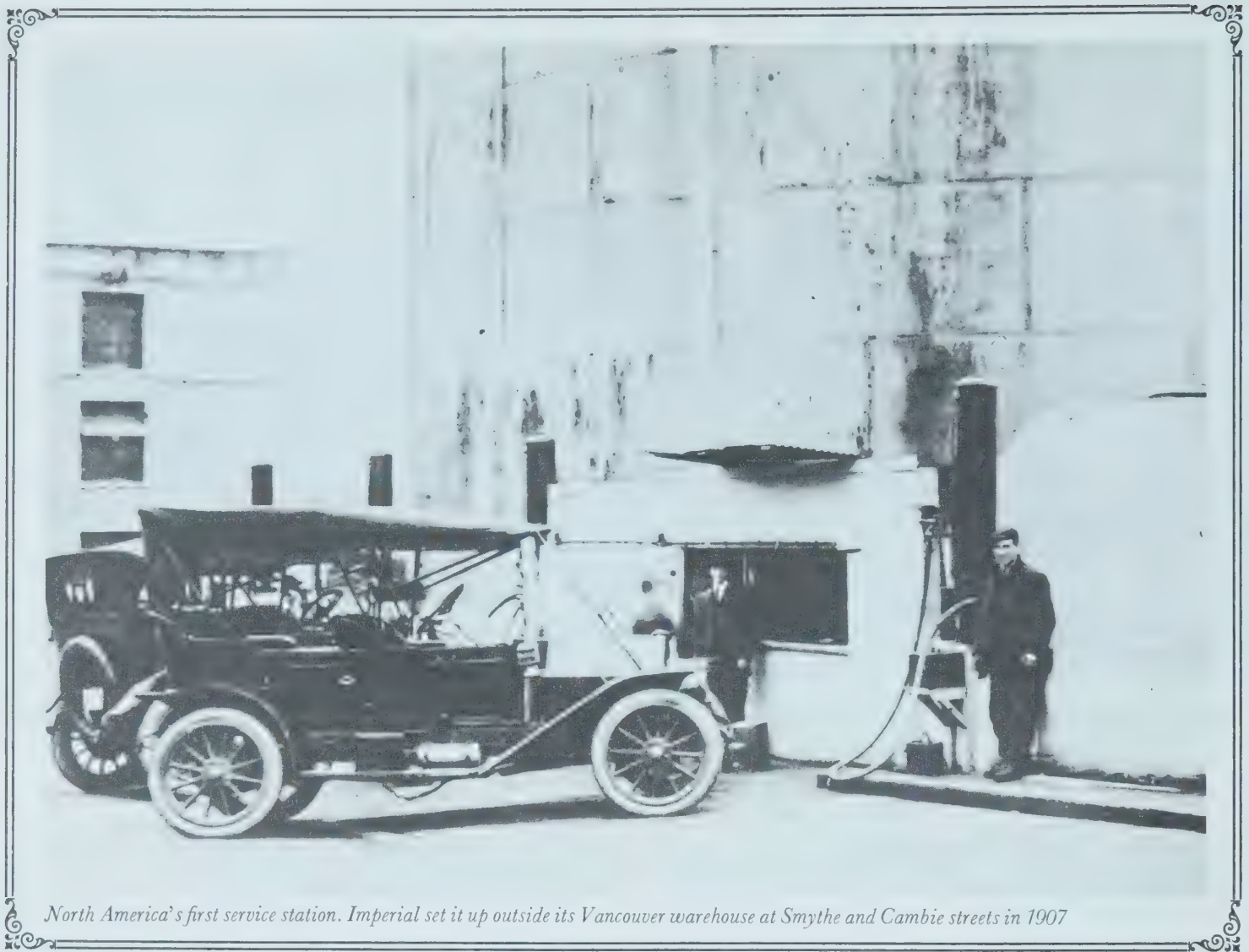
Why would she risk it? Well, part of the reason lies in the fact that the Nanaimo's cargo is essential to the well-being of the people who live and work at these remote places. The ship is a virtual general store of petroleum products, carrying every product

that could be needed on the coast. The crew are jacks-of-all-trades, prepared to repair a pipe line to a storage tank, or to lay one. They can put the tank in, too. She carries furnace fuel oil, the furnaces to burn it in, and the tanks to store it, and she makes calls like a sea-going milkman might. The Nanaimo will steam into a remote port, spend half an hour unloading, then steam on to another spot half an hour up the coast. Her log is full of folksy notations like this one, after a quick stop at Whalen Creek, about 80 miles south of Prince Rupert last June 24, at 11 p.m.: 'Stove warm, but nobody around.'

For years the Nanaimo regularly called at Mrs. Farmer's hotel near Tofino on the west coast of Vancouver Island at the north end of Long Beach with a very small order. Mrs. Farmer needed two barrels of diesel fuel to run her generator, and a couple of barrels of stove oil. She sold the hotel a few years ago, and now a road runs to Tofino, and that account is closed. The smallest delivery Imperial made on the coast last year was an order of 215 gallons of diesel oil to the Baptist Bible camp on Keats Island in Howe Sound. It was made by Barge 10, a fuel delivery barge that carries products to customers within 200 miles of the Imperial refinery at Ioco.

Imperial operates a third ship on the Pacific





Imperial Oil Archives

Photo loaned by Imperial annuitant George Dempster (below, in cap) who says: 'It was the best job I ever had,'





coast, the 37,000-barrel Imperial Skeena, built in Vancouver last year at a gross cost of \$3.3 million and delivered in April, 1970. The Skeena's function is to take product in large amounts to distributing points on the coast, from which the Nanaimo can load up for local delivery.

The Nanaimo is something of a legend on the coast by now (she has been sailing up those inlets and among those islands for 34 years and plans are in the works for a replacement to be built next year). Hardly a year goes by that she doesn't get involved in at least one dramatic rescue of a shipwrecked crew or a stranded yachting party. Perhaps the most dramatic incident she was connected with was the grounding of the Alaska State Ferry Taku off Prince Rupert in August last year. The Nanaimo took all of the Taku's 220 passengers aboard (she normally carries a crew of only 15), fed them all sandwiches and gave them coffee, and landed them safely at Prince Rupert. The tourist bureau there passed a vote of thanks to the ship.

Imperial has kept that letter on file in its Vancouver offices, but no special record is kept of the Nanaimo's rescues, on the theory that the occurrences are too commonplace. Most are quickly forgotten, although they still talk about the day the Nanaimo rescued the settlement of Alice Arm from freezing to death. It happened in the fall of 1952 when an Arctic cold wave descended on the region and choked the cove with ice. Supplies of heating

oil were completely exhausted in the unaccustomed cold weather, and when the Nanaimo arrived to replenish the tanks the ice kept her from reaching the port. The men of Alice Arm decided to dynamite a path for the ship; it took them a whole day and used 60 charges of dynamite. The Nanaimo eased up to the dock, unloaded her precious cargo to the shivering villagers, and slipped away again to her next wilderness port.

But derring-do and tiny deliveries don't keep the Nanaimo running; it's the forest camps with their needs for large amounts of fuel that keep her on the seas, along with the Imperial Skeena and Barge 10. The forest industries are the biggest single factor in British Columbia's economy; 50 cents of every dollar earned in the region originates in this one industry.

The industry is Imperial's second biggest customer in British Columbia (the motorist is the biggest, as he is everywhere in Canada) and Imperial has been meeting its needs since Mica Axle Grease came over the mountains from Winnipeg in 1883. Fifty years ago F. W. Evans walked eight miles through the bush to sell Skid Grease to loggers who needed it to lubricate the skids over which their teams of horses pulled the enormous logs. Today, statisticians labor over complicated analyses of woods operations to give each company tailor-made service based on such things as the kind and amount of machinery it operates, the distances



*Jimmy Chatwin, Bob Venn, Henry Betail, George Dempster, Harry Bigsbee, Jack Fivey, George Scott and Jimmy Cruikshank*



involved, the number of 'sides' the company is working on (a side is a forest area served by dragging line that can bring felled logs to a loader). With such information, Imperial can provide a contract that lets the foresting company forget about its fuel needs completely; Imperial figures out what its needs will be, when they must be met, and where to meet them, then goes ahead and does it. It is the first oil company in the region to provide such a service.

Imperial works in other ways to ease the logger's lot. One project it has in hand is a campaign to convince equipment manufacturers and forest companies to install adequate fuel tanks on their big machines. The standard 200-gallon tank will serve a yarder only about 3½ days; Imperial has helped convince them to use 800-gallon tanks instead – a yarder can run the better part of two weeks on a tank that size.

Most of the petroleum products Imperial sells in the Pacific region come from its refinery at Ioco, 11 miles up Burrard Inlet from Vancouver. Refineries are all no-nonsense places, bewilderingly full of pipes and boilers and jets of steam wreathing the high towers. You expect to find them in the industrial section of town, down by the tracks, and you usually do. But not the Imperial refinery at Ioco. It sits on a plateau at the top of a steep grassy hill 340 feet above the water. Behind it the land drops away before rising to join the mountains of the Coast Range. It is surely the prettiest refinery setting in Canada, perhaps in the world, and is so close to nature that deer, bears, even shy foxes frequently amble through.

The refinery was hewn from 87 acres of cut-over bushland 57 years ago and was ready to open in December of 1914. But war intervened; a German raider captured the tanker bringing Ioco's first charge of crude oil from Peru and the refinery didn't start operating until Jan. 20, 1915. It was the first oil refinery on the Canadian west coast, and it was so remote then that the only ways to reach it were by the rail spur line or by boat. Almost everybody went by boat, and the refinery maintained an express launch named the Royalite to keep in touch with Vancouver. It wasn't until 1917 that there was so much as a wagon road to connect the refinery with the surrounding country, and not until 1918 that it was possible to drive all the way to Vancouver. Possible it may have been, but comfortable it was not. It was to be another two years before a connection was made with the main highway to Vancouver. There's a good road to the refinery now







*The Imperial Nanaimo, a floating warehouse of petroleum products for 34 years, noses into a settlement far up the Pacific coast*





*An Imperial field party examines exposed rock on a steep bank of the Sikanni Chief River, 75 miles south of Fort Nelson, B.C.*





Imperial Oil Limited

but it's still a long haul from Vancouver. The haul was made unnecessary, at least as far as most of the products of the refinery are concerned, in May of 1956 when a 4.9-mile pipe line was completed from Ioco to Burnaby. It dips 49 feet to get under Burrard Inlet and climbs 450 feet to get over Burnaby Mountain.

The isolation of Ioco made everybody feel like a pioneer and to an extent they lived a pioneering life, first in tents then in bunkhouses and cottages. Mind you, there was electric light, steam heat and telephones, but the refinery's location left the people there pretty much on their own as far as their social life was concerned and the result was rather spectacular. Life revolved around a company-built recreation building named Imperial Hall, a two storey, half-timbered structure of 60 by 30 feet with 'ample space for parties, meetings (and) concerts and . . . a place for the boys to play indoor baseball during the winter months.'

The 'boys' in this quote from the Imperial Oil Review of May, 1919, refers to the Ioco refinery boys, the single men who worked at the refinery and lived in bunkhouses. Married employees lived in cottages at the refinery or, later, in Imperial-financed houses in a townsite of 43 new houses and 15 cottages moved from the adjacent refinery. All year long the 'boys' would receive invitations to dinner or an evening at the married men's homes, and once a year they got together early in December to repay their social obligations. The occasion was the annual Refinery Boys Dance. It was the social pinnacle of the Ioco season. In 1919 the dance was held at the Port Moody recreation hall, where a crowd of 300 danced to Lester Court's seven-piece orchestra ('Vancouver's best dance musicians'), and the opinion afterwards was that it was getting so popular the committee would have to book a larger hall.

The Refinery Boys Dance isn't held at Ioco any more, alas. In fact, the townsite of Ioco is gradually fading away. The Ioco refinery is at the edge of a large tract of land zoned for parkland, and the company's intention is to leave in a natural state those parts of its property that are not required for industrial purposes. The townsite of Ioco will eventually be part of the park, and Imperial is buying up the houses as they come on the market one by one, then tearing them down and preparing the sites for a return to forest. One of the first to go was the Refinery Manager's House, a semi-official edifice built in 1935. It was sold at auction in July, 1970, to Ivar Rannala. He lifted it off its founda-





*Ioco's products pipe line dips 49 feet under Burrard Inlet and climbs 450 feet over Burnaby Mountain to a terminal five miles away*



tions and barged it to a new site at Port McNeill on the northern tip of Vancouver Island.

Other Imperial installations in British Columbia have disappeared without a trace, but at least one that has gone is commemorated with a bronze plaque. The first service station in Canada, perhaps in the whole world, was opened by Imperial Oil at the corner of Smythe and Cambie Streets in Vancouver in 1907 in the wake of a wild brouhaha in the Imperial Oil warehouse that used to be there. In those days, motorists had to make their way to the warehouse to get gasoline for their wheezing, sputtering cars. One day a car drove right inside, clanked to a stop and emitted a final, deafening backfire. The horses in the warehouse snorted and reared, skittered sideways in their shafts and backed up with their heavy wagons. Piles of cases began to topple, barrels fell and rolled across the floors, draymen pulled manfully on their reins, and the warehouse superintendent roared a mighty oath banning cars from his premises forever and cursing their idiot drivers.

Well, maybe it didn't happen exactly like that, but something of the sort occurred and as a result a 13-gallon kitchen water tank was installed outside the warehouse with a garden hose attached. The tank was filled with gasoline and Presto! the first service station was born. It was still operating in 1919 and, according to a report of Imperial's region manager, was one of the best-paying stations in operation. The site is now occupied by a warehouse once again.

When Imperial invented the service station all of British Columbia's petroleum needs were met with imported oil. It wasn't until 1953 that Canadian crude oil became available in quantities on the Pacific coast, when the Trans-Mountain Oil Pipe Line was completed. Imperial Oil was the moving spirit behind construction of the line, and still owns 8.6 per cent of it. The first crude arrived at Ioco refinery on Oct. 20 of that year. In its first full year of operation the line carried 14½ million barrels of crude oil to British Columbia refineries; its throughput for 1971 is expected to be more than 116 million barrels. Almost 85 per cent of that crude comes from Alberta.

Not that British Columbia doesn't have any oil of its own. The province has a sedimentary basin with an area of nearly 53,000 square miles and 764 producing oil wells have been drilled. The first oil field in British Columbia was established at Boundary Lake, which is near Fort St. John in the north-east corner of the province. The region's first oil

discovery was made there in 1951 although exploration in the province dates back at least as far as 1906 when the first well was drilled near Steveston, which is now part of Greater Vancouver. It was dry.

Imperial brought in the first gas well in British Columbia, near Pouce Coupé in the Peace River District. The time was 1921 and the driller was a man named E. R. Parr. In those days it took two days and two nights to make the 400-mile train trip from Edmonton to Grande Prairie; when Parr got off the train he was still 80 miles from Pouce Coupé, and he went the rest of the way in a Model T Ford. Pouce Coupé then consisted of a hospital, a police post, a store and some log cabins, and Parr continued on to Rolla, another 28 miles north, according to his reckoning. At Rolla he got a horse and wagon for the last 14-mile lap over a rough trail to the drilling camp – a cookhouse, a bunkhouse, and a warehouse.

Drilling went on throughout that summer and well into December before the camp was closed for the winter.

The crew returned to the search the following March, and drilled 12 hours a day, six days a week. In September they struck gas and were jubilant because it indicated the presence of oil. 'In those days, gas was of no practical use,' Parr wrote later, 'because there was no economical means of transporting it.' Parr says they closed the mouth of the hole, but used the gas to fuel the rig and heat the camp, and drilled deeper for oil.

**O**n Dec. 27 disaster struck. The pressure of the gas burst the line that ran to the bunkhouse through a cellar dug out beneath the cookhouse, which traditionally serves as the centre of camp life. Gas in the cookhouse caught fire and set the room ablaze with the men inside. Then the gas in the dug-out exploded, blowing the men out into the yard in five-below-zero weather and setting the camp on fire. Their hands and faces burned, their clothes on fire, the men rolled in the snow and slapped at their clothing. The cookhouse was completely destroyed, and the food supplies with it, although the men saved the bunkhouse. But seven of the men were severely injured; their hair burned off, their faces and hands blistered, their eyes swollen shut. Two passing ranchers helped load them into a sleigh, and a painful journey out began.

Parr himself was badly burned, but he mounted a horse and rode ahead to a farmstead six miles away. When he got there he couldn't enter the



warm cabin; the heat increased the pain of his burns, so he stayed outside in the snow. The farmer got fresh horses ready for the sleigh for the remainder of the journey to Rolla. Parr rode on ahead and when he got to the settlement he telegraphed to Pouce Coupé for a doctor. Until the doctor and a nurse arrived at midnight, the druggist in Pouce Coupé gave the men first aid. All night the doctor and nurse worked on the men's burns, and next morning made them as comfortable as possible in a sleigh for the 28-mile trip to the hospital at Pouce Coupé.

'It was the longest journey I ever took,' Parr reported, but the men all survived and were put in hastily-installed beds in the Red Cross hospital at Pouce Coupé, swathed in bandages made from cut-up bed sheets. Six weeks later Parr's burns had healed sufficiently to permit him to leave. On the morning when he came out of the hospital the temperature was 28 below zero, 'and the air was still and clear as crystal.'

Thirty-five years later, in 1957, the gas that Parr and the other men in the crew discovered finally found its market in Vancouver and the United States, transported there by a pipe line. Parr, retired by then, returned for the ceremony that marked the completion of the line.

Gas production in British Columbia amounted to 340 billion cubic feet last year, from fields stretching all the way from Dawson Creek to the boundary with the Northwest Territories. Gas from these fields makes British Columbia Canada's second largest producer of natural gas, behind only Alberta. Together, they produce 97 per cent of Canada's natural gas.

There is oil in British Columbia, too, in reservoirs in the same area where the gas is found – the northeast corner. The region produces a little less than six per cent of Canada's total crude oil production, about 30,000 barrels per day, a little more than half the oil British Columbia needs. Most of the rest comes from Alberta. Imperial produces nearly seven per cent of the region's crude. Since Imperial began exploring in British Columbia in 1921, it has drilled 266 gas and oil wells; over the years it has spent more than \$90 million exploring for oil and producing oil and gas in British Columbia. Imperial's gross investment in property, plant and equipment for all its operations in the region stood at \$104 million on Dec. 31, 1970.

No oil company has made a greater commitment to the province, and few companies of any kind have a longer history here, or deeper roots.







*Imperial crew diamond-drilling near Kimberley, B.C., part of a long-term country-wide minerals search that began in 1967*



# THE WESTERN MOUNTAINS

The Rockies are only part of this vast cordillera of towering peaks and spectacular valleys

by Jon Ruddy

'There are no Rocky Mountains,' travelers on the Union Pacific and Central Pacific Railroads assured George Grant. He and Sanford Fleming were heading west in 1872 to survey the route of the CPR and in those days most eastern North Americans just didn't believe reports filtering in from Indians and fur traders of an ice-capped stone wall rising sheer off the prairie. Fleming and Grant found the mountains, all right, 'the

scarp as clear as if they had been hewn and chiseled for a fortification.'

Today another mountainous misconception is common among Easterners, who can't see past the fabled Rockies to the vast ranges that lie beyond: the Purcells, the Selkirks, the Monashees and the Cariboos, all of which comprise the Columbia Mountains, and the Ominecas, the Cassiars, the Skeenas, the Cascades, the Selwyns, the Ogilvies, the St. Elias, the Hazeltons,

*The rising sun gilds the Rockies along the Kicking Horse River east of Golden, B.C.*













the Richardsons, the British Mountains, the Coast Mountains, the Island mountains . . . and more.

This great western barrier is 400 miles wide and 1,600 miles long, most of it in British Columbia and the Yukon. The Rockies themselves are not predominant, being only about 50 miles wide for most of their length, which is just under 1,000 miles, ending at the Liard River south of the Yukon. Nor are the Rockies our highest mountains. The highest Rocky is the 12,972-foot main attraction in British Columbia's Mount Robson Provincial Park. Mount Fairweather (15,300 feet), British Columbia's tallest peak, is in the rugged St. Elias range in the northwestern corner of the province, just across the border from the Yukon's towering (19,850 feet) Mount Logan, the country's highest point.

But the Rockies, which march northwest from the 49th parallel along both sides of the continental divide, were the hardest to traverse. After 100 years the Canadian range has been breached in just five places by rail lines and highways. The first conquest, as every schoolboy knows, was a condition of British Columbia's entry into Confederation. That story started in the 1850s when John Palliser found the Crowsnest and Kicking Horse passes — only to report to Her Majesty's Government that 'knowledge of the country . . . would never lead me to advise a line of communication from Canada, across the continent to the Pacific, exclusively through British territory.' Less prudent minds prevailed, and between August and December, 1883, the CPR punched through the Kicking Horse, 5,291 feet above sea level. In his 1894 history of the Northwest, Alexander Begg called it 'the greatest achievement of human labor the world has ever seen.'

It was certainly a big job. But it was the work of ants compared to the mountain building that made it necessary. The Rockies are a part of the cordilleran chain, the spiny backbone of the Western Hemisphere. They are young as mountains go, only about 60 million years old, and being young

*The clouds part on a dull August day and suddenly the 11,636-foot peak of Banff Park's Mount Temple appears*





Freeman Patterson

*Roaring like thunder, an avalanche crashes down a precipice near Mt. Geikie in Mt. Robson Provincial Park*

they are raw and violent, not round-shouldered and submissive like such remains of ancient ranges as the Precambrian Shield. The modern Rockies were born as dinosaurs died in their shrinking swamps during a period when the climate became drier. Subterranean pressures lifted masses of rock high into the air along fault lines. Glaciers later sculpted the peaks and scratched alpine lakes while glacial rivers cut valleys and gorges. The glaciers are still in retreat and such earthquakes as the one at Yellowstone in 1959 are a sign that God has not yet stopped making mountains.

To the west of the Rockies mountain-building came earlier. Most peaks of the British Columbia coast and interior are about twice as old, the products of upward movements of molten rock, sometimes in volcanic eruptions, followed by prolonged erosion. By chance Canada has no active volcanoes, but there are some in Alaska, and there are recently-extinct volcanoes in British Columbia and the northwestern United States.

The mountain barrier is an area of geographic complexity and confusion, in which the well-defined Rockies occupy only the eastern flank. Within the mountainous belt are regions that are gently rolling except where the rivers have made sharp incisions: for example, the interior plateau of central British Columbia. But this is part of the mountains, too, for plateaus have been pushed up thousands of feet above the sea by the same forces that built the Skeenas and the Cariboo. The ranges themselves tend not to differ markedly from each other except in height and accessibility, but within each range there is an astonishing variety of landscape.

No Canadian has better described this splendid – and unexpected – diversity than R. M. Patterson in his books *Trail To The Interior* and *The Buffalo Head*. Here is Patterson's farewell to a tiny range in northernmost British Columbia which he had partially explored in 1948: 'In the early morning of that day the Horse



Ranch Range lay blanketed in heavy cloud. But as I drew further away from it the clouds slowly lifted, and for a little while the sun shone. I beached the canoe and got out the glass for a last look . . . And a simpler-looking range of mountains, I thought, it would be hard to find. In fact, the whole thing looked like a long, low hill, one that would present no obstacles or hazards . . . Who would ever imagine that there were lakes concealed up there – and rock-walled amphitheatres and dangerous cliffs? And a view that seemed to reach beyond the confines of the known world – and caribou with wide-branching, majestic horns?’

On one foray into rugged country on the British Columbia side of the continental divide, south of the Kananaskis River, Patterson had the unique joy of finding – and naming for his wife Marigold – an unknown and sizeable lake hidden behind a natural limestone dam between two remote peaks.

In a geological perspective the history of man in all these mountains is as brief as the blink of an eye. The Rocky Mountain Trench – a flat-bottomed trough between two and 10 miles wide running the length of the Canadian Rockies and separating them from the older British Columbia ranges – may have been the route south for prehistoric man after he crossed the isthmus that then linked the present Siberia and Alaska. At any rate his descendants settled on both sides of the continental divide following the last ice age, which ended only 10,000 years ago.

When the first Europeans arrived, there were about 25,000 Indians in the mountains: Athapaskan people in the north; Salish in the south. There were smaller tribes, too. The coastal Tlingit and Tsimshian had followed rivers inland, and a prairie people, the Kootenays, had pushed west into the Rocky Mountain Trench. Today, their descendants number more than 46,000 in British Columbia.

The first European to see the mountain barrier was probably a fur trader named Anthony Henday, who

*Meltwater from Daly Glacier surges over the lip of Yoho National Park's Takkakaw Falls and drops 1,200 feet*

Freeman Patterson





in 1754 climbed a hill near today's Innisfail, Alta., gazed on the Shining Mountains of legend and went no farther. Alexander Mackenzie and his Nor'westers made it to the Pacific in 1793 on behalf of the beaver trade, and by 1810 there were several trading posts in central British Columbia. But it was gold that drew Europeans in numbers that first marked the land. Strikes in the Cariboo in 1858 and the Klondike in 1896 resulted in what are still the two most populated areas of the inland mountains.

The rumpled face of the far west posed a fearful challenge to early travelers. In *The National Dream*, Pierre Berton has graphically described a winter exploration, in 1875, of Smoky River Pass in the British Columbia Rockies, then considered a possible route by the CPR. The eight-man party was led by E. W. Jarvis.

'One day,' says Berton, 'they experienced a formidable change of temperature—from 42 below zero to 40 above—and this produced a strange exhaustion, as if they were suddenly plunged into the tropics. One morning, while mushing down a frozen river, they turned a corner and saw an abyss yawning before them: the entire party, dogs and men, were perched on the ice ledge of a frozen waterfall, 210 feet high; the projection itself was no more than two feet thick. One evening they made camp below a blue glacier when, without warning, great chunks of it gave way; above them they beheld "masses of ice and rock chasing one another and leaping from point to point as if playing some weird, gigantic game." A chunk of limestone, 10 feet thick, scudded past them, tearing a tunnel through the trees before it plunged into the river...'

One of the remarkable things about this passage is the fact that there is nothing to date it. The Jarvis party's



*Top: Wild lupins grow to a height of 18 inches on a wet western slope halfway up 6,650-foot Mt. Revelstoke. Middle: Tiny bird's nest fungus on Vancouver Island. When raindrops hit the cup, the spores scatter. Bottom: In a high meadow near Tête-Jaune Cache, B.C., Indian paintbrush blooms amid clover and wild lupines.*





Freeman Patterson

*Rain forest in a valley on Vancouver Island just east of Port Alberni about noon on a rainy December day*

adventures could have occurred today in a landscape scarcely changed in a century. This is especially true of the Rockies, where there were no major gold strikes to encourage and finance development. There is some coal and sulfur, gas, oil and wood and a superabundance of water—this last a national treasure of dawning importance. But many of these mountains are without history: unstoried alps, shading into myth. Climbers still dream of discovering a major peak in one of the still-unmapped ranges in northern British Columbia and the Yukon, although chances are slim of such a find. But there are many peaks in the 10,000 to 11,000-foot range in the more inaccessible areas yet to be climbed.

Today only a fraction of the 10 million tourists who annually visit the Canadian mountains venture far from their cars. The tourist action is mostly in the national parks, four of them in British Columbia: Kootenay and Yoho on the west slope of the Rockies and Glacier and Mount Revelstoke in the Selkirks. A visit to these lovely spots is by no means necessarily a comfort-lover's compromise, for beyond the lawns and pavement the parks present all the rugged glory of the mountains. In the United States ranges the salient feature is lava; in ours it is ice. The timber line is at 7,000 feet. Above 6,000 feet some snow falls in every month of the year. Between the peaks are green valleys set with gem-like lakes, glaciers, gorges and alpine meadows.

Kootenay National Park, traversed by Sir George Simpson and James Sinclair of the Hudson's Bay Company in the 1840s, includes the valleys of the Vermilion and Kootenay rivers, with spectacular canyons and waterfalls, and Radium Hot Springs, where a thousand at a time soak in 113-degree water that's slightly radioactive. Some of them come here in wheel chairs and walk away. Yoho, a Cree word expressing wonder or astonishment, is an especially beautiful area bisected by the Kicking Horse River. The park contains the most familiar peak in Canada: Mount Burgess, depicted on







the back of the \$10 bill. Glacier National Park has one of the biggest annual snowfalls in the world : up to 800 inches in the higher areas. Some of this comes down in avalanches, if the Royal Canadian Artillery doesn't shoot it down first. Howitzers break up dangerous accumulations in 15 spots along the Trans-Canada Highway. Concrete snowsheds shelter the most vulnerable parts of the road. Mount Revelstoke, at the Big Bend of the Columbia River, is the site of a gold rush and some famous explorations by David Thompson and, later, Major A. B. Rogers, who found a feasible pass through the Selkirks in 1881.

Virtually all the animal life of the mountains can be seen in and around the national and provincial parks, although wolves and the endangered mountain caribou have retreated from most areas and such species as cougar and wolverine, though common, are rarely seen. Bighorn sheep (except in the Selkirks), coyotes, mountain goats, moose and deer (whitetailed and mule) are variously in evidence along with an ark-load of smaller creatures. The sage hen, a large grouse, may be the only extinct species of the mountains – so far. Many are in decline, including old *Ursus horribilis*, the grizzly bear, which still can be seen on the high scree at Glacier National Park.

Black bears are everywhere, occasionally biting the hand that feeds them. Park officials emphatically advise leaving them alone. This is difficult because the bears seem so tame, trundling along the highway or sitting on the fairways of golf courses viewing with mild interest the arcane rites of the players. But big animals are unpredictable. Once a bear pulled out all the water pipes from under a park dance hall ; when they were fixed he came back and pulled them out again. And a moose, enraged by its whistle, once charged the CPR's trans-continental train, The Canadian,

coming off second best.

The mountains affect British Columbia and Canada in many ways. Barriers to travel and communication, they still cause territorial divisiveness and may be responsible for the commonly-held view that Ottawa is seldom attuned to the far west. One could also argue that they helped give the nation purpose by posing a challenge and constituting an inspiration. Certainly the Easterner loves to contemplate these ranges. Their exuberance shocks a vision dulled by the sere and shattered contours of the shield. Tex Lecor, a Quebec singer, folk hero and separatist, hitchhiked across English Canada. His reaction to the mountains, he told me, was 'a feeling that this was my country, more beautiful than France or Sweden. And for a while I didn't want to be a separatist.'

The mountain area is a jumble of climates. The coldest spot in Canada is Snag, on the Yukon Plateau between the Kluane and Dawson mountains ; the warmest is at Kamloops, on the plateau between the Columbian and Cascades mountains ; the wettest is at Prince Rupert where the Coast Mountains meet the sea and the annual average precipitation is 94 inches, or nearly eight feet.

In the mountains, climate is a local and transitory condition dependent on such factors as aspect, elevation, soil, latitude and slope, and complicated by weather phenomena like the famed Chinook, a southwest wind that can raise the temperature 40 degrees in 10 minutes and melt snowfields overnight. Some valleys, like the Thompson near Kamloops, are virtual deserts with nine or 10 inches of rainfall a year, while mountain slopes nearby may receive 50 inches or more. Generally speaking, rain and snow are heavy on western slopes, light on eastern slopes and in their valleys. A mountain ridge running northwest typically has a lush

forest facing south and west and a dry, grassy slope on the opposite side.

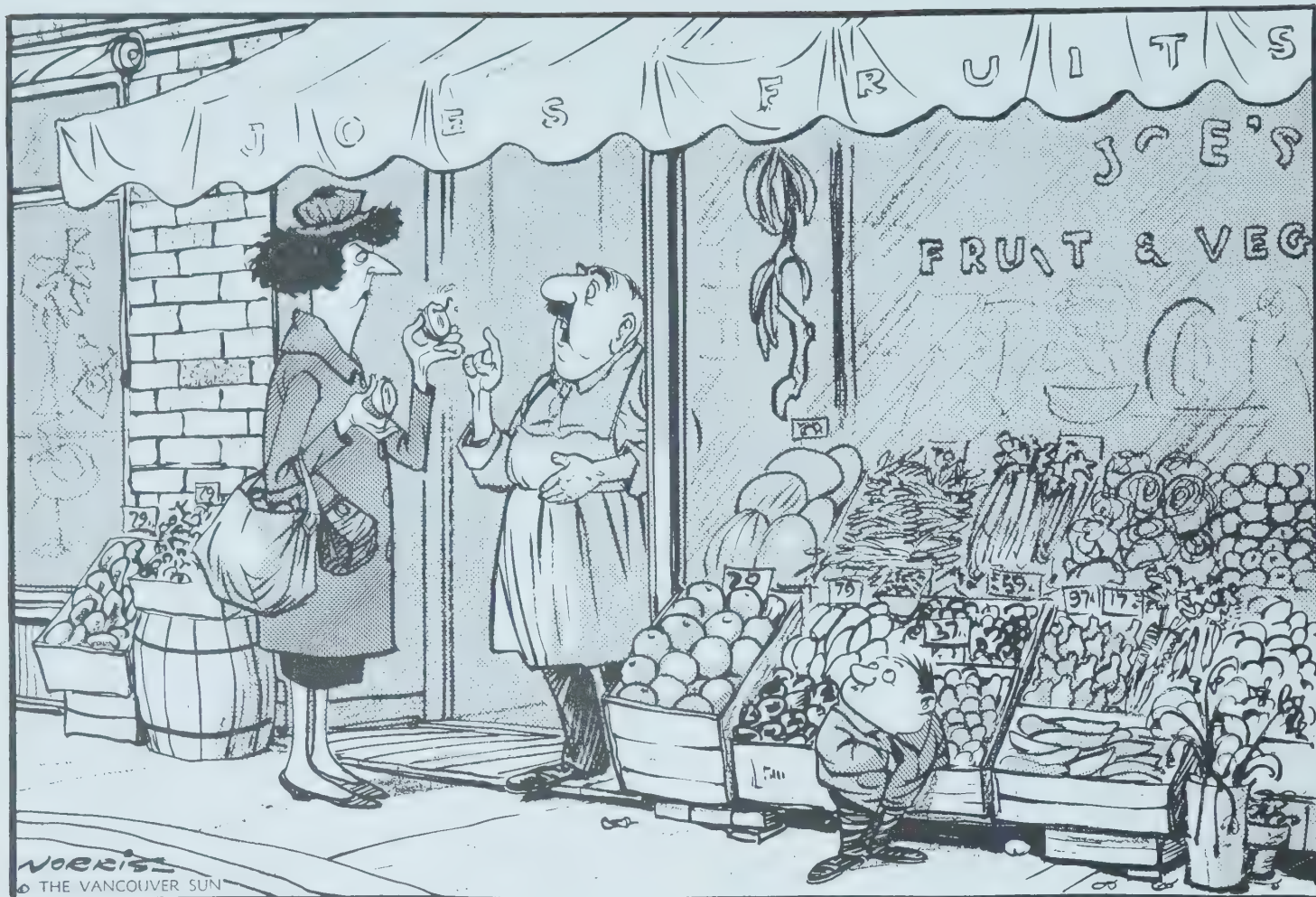
Man's influence on the mountains has been sporadic and spotty. The vast timberlands in central and southern British Columbia have been most affected, first by fires that roared out from the rail lines and the gold fields, more recently by the forest industry, a vital mainstay of the Pacific economy. Farming has been limited to such areas as the irrigated Okanagan Valley, where fruit trees are a major resource. The Cariboo gold strike caused a demand for beef, which attracted ranchers to the southern grasslands. But most of the soils will always be poor, best suited to the cropping of trees. There are other incursions : large power dams on the Columbia, Peace and elsewhere have created lakes where there were once valleys, and minerals worth \$300 million are extracted annually from the interior ranges.

In the Rockies the Peace is the only river that cuts all the way across, and north of this cut is the wildest frontier of all. Less than a decade ago the Geological Survey of Canada started working on the first detailed map of these northernmost Rockies, 250 miles of blue-grey peaks in northeastern British Columbia reaching almost to the plateau of the Liard. Grizzlies, black flies, flash floods, forest fires and cold plagued the 16-man party. Here the timber falters in alpine meadows where Stone sheep lift their black heads and barren slopes climb swiftly to icy summits lost in cloud. The Terminal Range, they call it. At its end an unnamed rounded peak bulges from a mantle of spruce ; it's the last mountain, the end of the Rockies.

Other ranges – the Selwyns, the Ogilvies, the St. Elias – have never been fully explored. Carrying their packs of snow, these mysterious giants march off beyond the horizon, beyond the known.

*The Coast Range north of Vancouver in June. Their peaks surpass 10,000 feet and stay snow-covered all year*





*'... a hale and healthy worm, Mrs. Phelps, is living proof of the complete absence of dangerous insecticides ...'*

# The Value of LEN NORRIS

as appraised by the man most likely to know it, his boss Stuart Keate, the publisher of The Vancouver Sun

It may cost me a bundle, but I've got to confess that Len Norris is a publisher's dream; a jewel. Conscientious. Unflappable. Loyal. A man of quiet dignity. A lousy putter.

Most newspapermen tend to be irreverent, prickly and rumbustious. Some drink too much. Others wear beards and love-beads. Some throw hamburgers at waitresses, without separating the patties from the plate.

Cartoonists are no different. I know one who got so mad at a motorist who slipped into a parking space the cartoonist was trying to enter that he charged the offender like a maddened bull, and did \$700 damage. I'm related to one who was photographed taking a custard pie full in the face at the age of 59. I know another who makes drawings of life in Toronto from his home in Kelowna, 2,400 miles away.





*'We'd adore motoring through Quebec . . . doing our bit, so to speak, to knit Confederation.'*

In the midst of all this magnificent lunacy, Len Norris stands out as a wispy Pacific Coast beacon of sanity. For 20 years now he has been grinding out his award-winning whimsies for The Vancouver Sun, earning in the process the love of his city and the accolade of Walt ('Pogo') Kelly as 'the greatest in the business.'

No fuss. No sweat. At 9:30 each morning the 5'10", 144-pound Len Norris eases into his office on the third floor of the Pacific Press building; at 4 p.m. he leaves with his brief case under his arm, dropping off the day's cartoon at the engravers en route. Just like a banker, or a broker, or a bricklayer — except that the work he has done during those seven hours comes parlously close to genius.

Norris lives in a modern, \$40,000 house perched on a rock in West Van-

couver. His working day begins there at 7:15 a.m. when he arises, brews a pot of tea, and indulges what he calls his 'quiet hour'. This is the period of cartoon incubation. He reads the morning paper, flips through the newsmagazines, listens to the news, groping for the idea that will come alive on page four of The Sun on the morrow.

At nine o'clock he hops into his Mercury Cougar, tools across the Lions' Gate bridge, through Stanley Park, across Granville Street bridge and south to the spanking new Pacific Press plant.

By 11:50 a.m. the furious contemplation of the quiet hour has been transformed on to copy paper in three roughs, little more than squiggles in soft pencil. These he presents to the editorial-page editor Cliff MacKay, whose craggy seldom-smiling features break out into a broad grin as he surveys his colleague's

handiwork.

'It's a tough choice,' concedes MacKay. 'You select one and put the other two aside, knowing that almost any newspaper in Canada would be delighted to print them.' Many cartoonists bleed internally in quest of just *one* usable idea each day. From time to time Bob Bierman of Victoria will stare glumly at his board for six hours, get up, put on his hat and coat and flee the building, pausing only long enough to poke his head into the editor's office and say: 'Sorry — no ideas today.'

Most days, MacKay and Norris adjourn at noon to the fourth-floor cafeteria of the building for a 45-minute lunch and a review of the weekend's golfing disasters. At 1 p.m. Norris is back at the drawing board, ready to finish off the selected rough for tomorrow's paper. Out comes the Chin-Chin



bottle of Indian ink; out comes the Hi-Art 62 Illustration Board paper; out come the Windsor & Newton Pure Red Sable brushes.

By 4 o'clock, his assignment completed, Norris slides into his Burberry and threads his way through the newsroom to the staff elevator, thence down through the streets to the company parking lot, to his car, and home.

The characters he has presented to the engravers are a wild agglomeration of cops, politicians, CBC technicians, dowagers, hippies, housewives and evil-looking little monsters shaped like hydrants. The adults appear to be big-nosed, well-fed ding-a-lings with spines of sheer spaghetti. When they stand at a curb, the tips of their shoes droop over the side, towards the gutter. As befits their British Columbia milieu, they seem to be one generation removed from the British Isles: they love gardening, golf, cricket, politics, art galleries and cocktail parties.

All these Norris observes with a gentle amused detachment. After 20 years in the business, he does not think of himself as an editorial cartoonist. A more accurate description, he believes, would be social commentator.

There is truth in this. Not for Norris the old editorial-page cartoon clichés of Jack Canuck and Uncle Sam; Big Business as a fat man with a huge cigar in his mouth; Labor as a guy in overalls, carrying a wrench; War as a battered globe with an eye-patch, labelled Mars.

Rather, Norris seeks *reaction* to the news of the day through the eyes of Mr. and Mrs. Average Citizen. An interesting contrast in styles turned up recently in The Sun in the treatment of the Amchitka bomb test by Norris, and by his colleague (and friend) Roy Peterson.

Peterson produced a savage cartoon of President Nixon dancing on the handles of a high-explosive detonator. One of the great caricaturists of this country, Peterson (who back-stops Norris at The

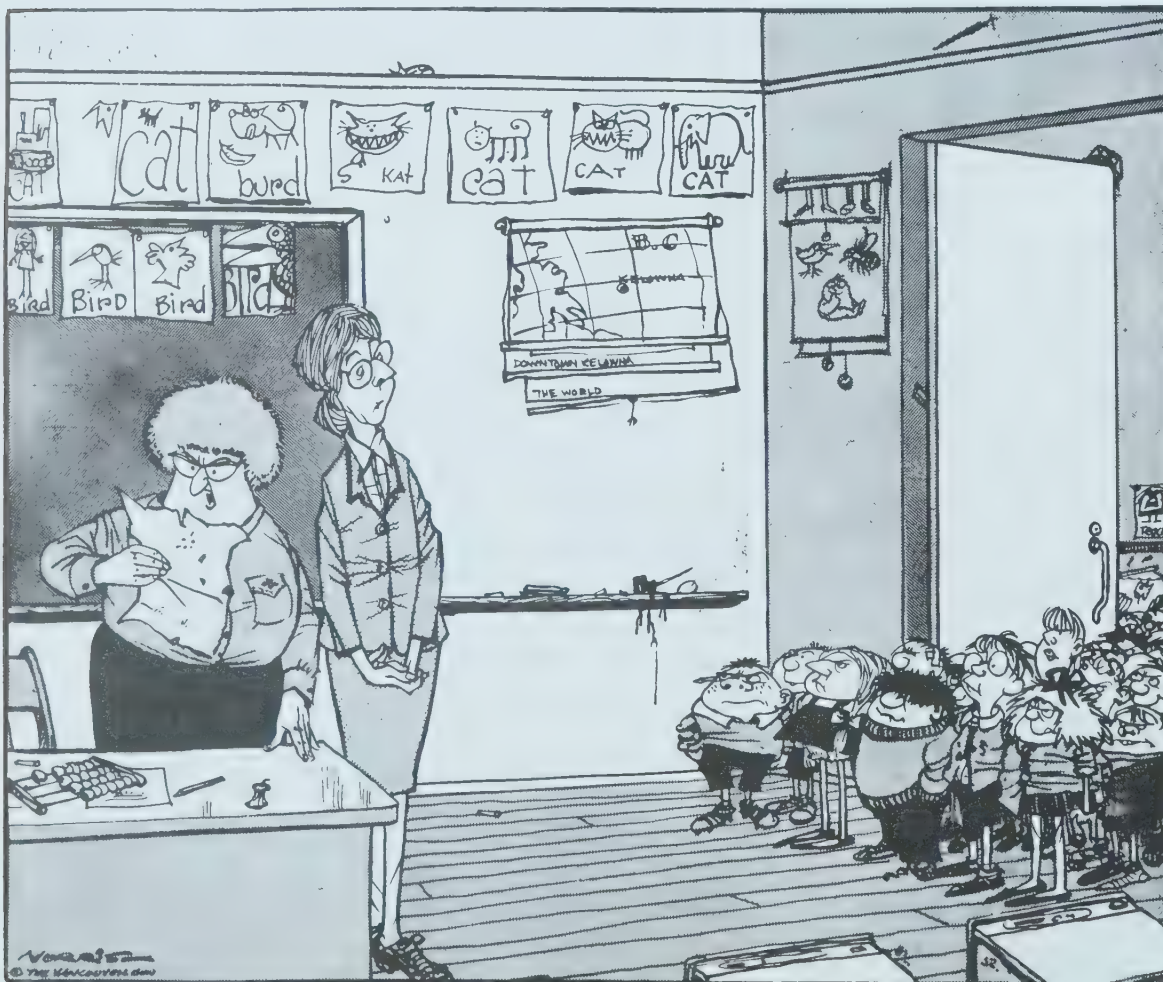
Sun when he is on holidays) had made his point in the Herblock style, with brutal candor.

Norris made his point, too – but in an entirely different way. A man stands in the street, reading a newspaper headed: AMCHITKA BLAST SET. Beside him are a few unhappy Hallowe'en urchins, peering into a store window which carries the notice: SORRY – SALE OR USE OF FIREWORKS IS PROHIBITED.

This oblique, off-beat approach sets Norris apart. 'We know there is no animosity in his work,' says Vancouver Police Chief John Fisk, whose men frequently appear as *opera bouffe* characters in Norris cartoons. 'That's why we hung several of his originals in our mess' – and, he might have added, why the police themselves made Norris an honorary member of that mess.

Another example of the subtle Norris shaft turned up in the recent visit to Vancouver of Russian Premier Kosygin.

## ...on children



'What bugs me is which one of them knew how to spell "ultimatum".'



Elaborate protests were mounted. Bitter speeches were made. Downtown was decorated with wall-to-wall police. And what did Norris do?

He drew a picture of three people in a living room, two women and a man. The man was standing, an indignant look on his face, wearing a sports jacket and slacks. The caption, one woman to the other:

'As an orderly and polite, yet firm protest during Mr. Kosygin's visit . . . Peter is wearing his golf-club-crested jacket.'

Norris and I chatted about the cartoon over a cup of coffee.

'I read about all the preparations for the Kosygin protest,' he recalled, 'and decided that I would come at it sideways. I felt the point would be underlined if I moved as far away from violence as possible. Hence the guy with the Capilano Golf Club crest on his blazer.'

This quiet, understated approach to

editorial-page cartooning may well be Len Norris' unique contribution to the art in Canada. He was certainly the first in this country to adopt the technique, although others followed. He thinks the concept is 'essentially British - or continental.'

This, in turn, may stem from some hazy boyhood memories of London, where Norris was born in 1913. His family emigrated in 1926 to the Lakehead, where his father took a job as a stationary engineer in a pulp mill.

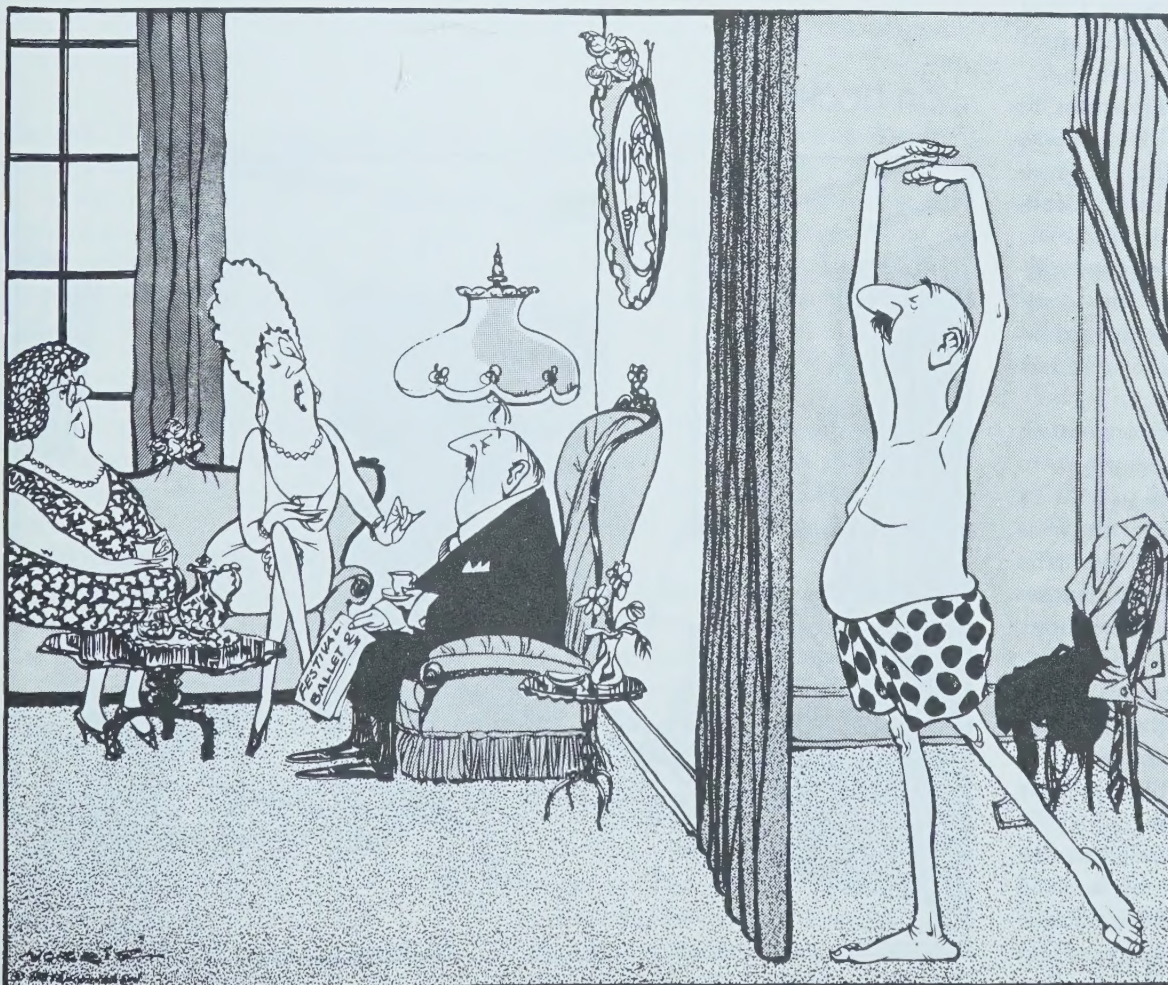
Came the depression. The pulp mill shut down and the Norris family moved to Toronto where, along with millions of other Canadians, they suffered some very harsh days. Son Len weighed coal at dockside for \$12.50 a week, but the experience had at least one useful side effect. A man named Frank Dowsett, recognizing some artistic traits in his grimy apprentice, steered him into some commercial illustrations for the Elias Rogers Coal Company.

Later came a brief joust with the Ontario College of Art, which Len says 'did me no visible good' and in some arcane manner stirred in his youthful breast a lifelong distrust of those who 'play the art game.' The subject of *avant-garde* art turns up frequently in Norris cartoons and, although he has had several one-man shows of his work, remains for him a source of amusement.

After a short spell with the Stanfield agency in Toronto as art director and production manager, Norris joined the Royal Canadian Electrical and Mechanical Engineers as a lieutenant and spent the war 'fighting the battle of Ottawa. I was editing a magazine called CAM. It was great fun, full of cartoons, comics and a sports-writing style.

'Our editorial policy was preventative maintenance. They sent the damned thing to every unit that had any kind of equipment; motorcycles, jeeps, tanks, you name it. I remember once they sent

...on culture



'... as Rodney so aptly put it, mere words simply cannot do justice in describing the magnificent Festival ballet . . .'



a batch of copies out to the Indian Army.'

Whatever Norris' assessment of his war duties, somebody must have held them in high regard. In the closing days of the conflict he was awarded an MBE, which he is at great pains never to mention because (he says) 'these gongs came in allotments.'

The wartime assignment led him inevitably to Maclean-Hunter, where he was placed in charge of artwork for automotive trade papers such as *Bus & Truck Transport*, which numbered among its early editors the distinguished fictioneers Arthur Hailey and Arthur Mayse. Eventually, Norris moved on to Canadian *Homes and Gardens* magazine.

'By 1948, I decided that something had to give. I was knocking myself out, working for *Homes and Gardens* in the day and doing free-lance illustrations at night. I wasn't having any fun. I realized that I was hopelessly caught up in the rat race.'

Then came the turning point: a move across the country to the Pacific Coast, and an entirely new career.

Now that Norris is an international figure, the Vancouver woods are full of editors, sub-editors and even publishers who claim to have 'discovered' him.

The prime instigator, according to Norris, was Pierre Berton. A former *Sun* feature writer, Berton had moved on to Toronto as managing editor of Maclean's, flagship of the Maclean-Hunter group of magazines. Like all good editors, Berton was a superb talent-scout. In the unassuming *Homes and Gardens* illustrator, Berton spotted a considerably undernourished genius.

He wrote a letter to Don Cromie, then publisher of *The Sun*, advising him to hire Norris. Cromie weighed in with an offer. For a year, Norris demurred. His wife was a Toronto girl, to whom the prospect of uprooting a home to traverse the country, with two small boys, was fraught with perils.

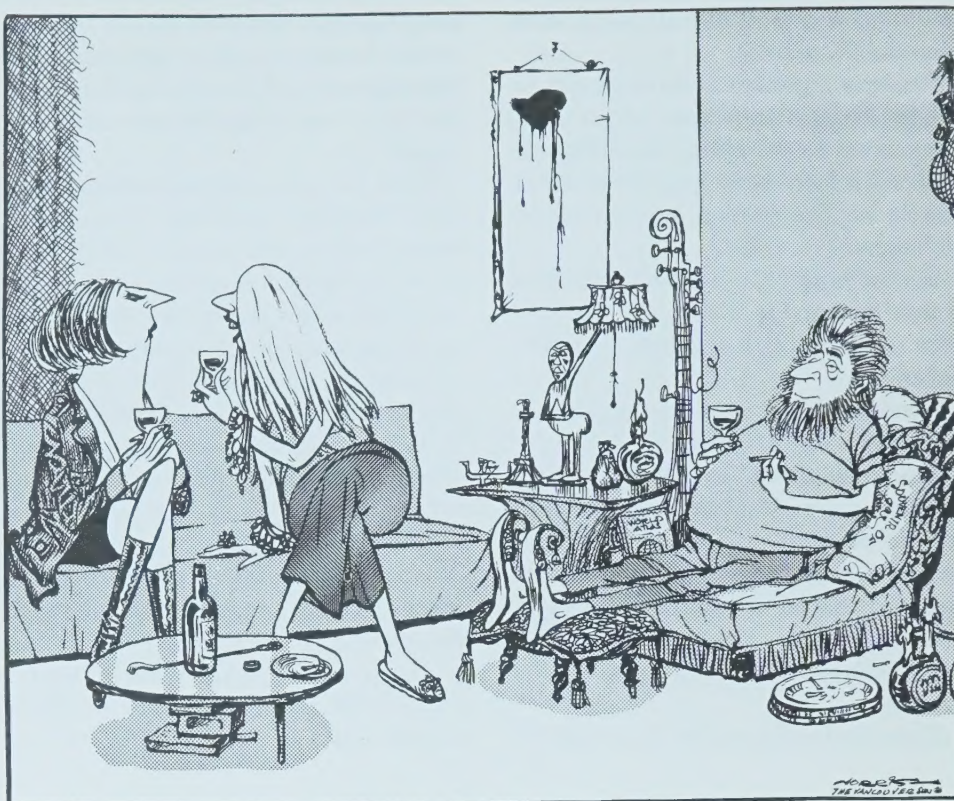
A year later, Cromie tried again. 'He caught me at exactly the right moment,' Norris recalls. 'The rat race was becoming unbearable. I wanted to play some golf and smell the flowers.'

The move very nearly ended in disaster. When Norris and family arrived in Vancouver, Cromie was off on a trip.

'Nobody knew me,' Norris grins, 'nor did they want to know me.'

'I was at a bit of a loss. I floundered

## ...on modern painters



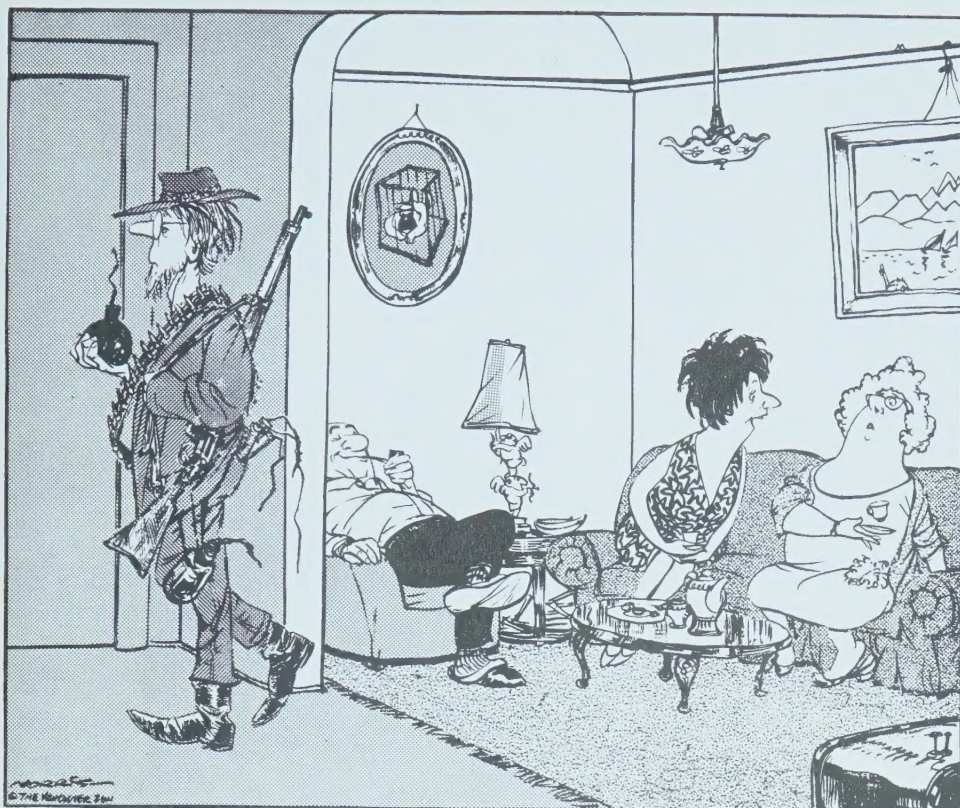
*'It's only vin du pays . . . we're a bit strapped as Cecil is between Canada Council grants.'*

## ...on hockey



*'You could see it coming when tempers began to flare with four minutes left in the third period . . .'*





*'I know you wouldn't think it to look at him . . . but he has a good job in the Montreal head office of an active, go-ahead, government-sponsored, young Canadian company.'*

around. I had no political experience and no interest in the subject.

'I did a few illustrations and even started a comic strip for the Sun magazine, called "Filbert Phelps." I was the guy who drew maps for murder stories reading "X marks the spot where body found."

'It was 1950 before I tried my idea of what an editorial cartoon should be. I was a complete failure. There were four meanings to each cartoon, instead of one.

'So I asked myself: "Why not try the English approach?" I was greatly intrigued by the styles of Giles, Emwood and Trog, fellows like that.

'Relate the thing to *characters*. I felt my aim should be to *illustrate* social events.

'I just about went back to Toronto after six months. But I hung on, and after 18 months I began to feel comfortable. I seemed to know where I was going.'

Where Norris was going was straight to international stardom. If The Sun was rising, first to 200,000 copies a day

and thence onward and upward to third place among Canadian dailies, its cheeriest beams emanated from the 14th floor eyrie of its cartoonist in the old Sun Tower.

A Christmas collection of Norris favorites was published, and quickly snapped up by admiring readers. Today it is a sell-out at 27,000 copies.

One year after he started on the editorial page, Norris won the National Newspaper Award for 'best cartoonist in Canada.' (He no longer enters the contest.)

Malcolm Muggeridge, then editor of Punch, came to town and looked Norris up, saying that he had heard of his work and was soliciting material for his magazine.

'He offered me £50 for a cartoon and paid me \$50,' Norris recalls, wryly. 'I've never forgiven him for it.'

The Duke of Edinburgh came to Vancouver in 1954 for the British Empire Games and was entranced with a Norris cartoon that showed some Games officials poring over a seating plan and remarking:

'Just in case the stadium isn't finished I'd better put His Highness down for the high hurdles and he'll be sure of a good seat . . .'

In due course, a letter arrived from Buckingham Palace, signed by the Duke's private secretary, Commander Michael Parker, wondering if the Duke could buy the cartoon for his study?

Norris was slightly offended. He thought he'd drawn a much funnier cartoon on the same games: a rower in an eight-oared crew, standing rigidly at attention in his shell, saluting the Royal box while the cox'n bellowed:

'Not NOW—when you meet him later.'

In spite of all the honors and praise that have been lavished on him over the years, Norris remains an essentially shy, soft-spoken individual who appears baffled by much of the world around him, and is content with his place in it. He has never made a speech in his life, has appeared on TV only once or twice, and winces when The Sun's promotion department bludgeons him into an autographing party for his books.

'I'm no showman,' he says. 'I like to stay well in the background. The point is, you're never in the flesh what the public expects you to be.'

At the same time, he is curious about other cartoonists and thinks that MacPherson of The Toronto Star is 'just fantastic — head and shoulders above anybody in North America.' Another of his favorites is Giles of England.

A chance to meet his hero, and a lot of other renowned American and European cartoonists, came two years ago when the British Cartoonists' Association hosted an international convention. The Sun sent Norris and Roy Peterson along.

They visited the famous board room of Punch, met Princess Margaret over cocktails, ate at the Cheddar Cheese, and concluded their session with a reception at the Europa hotel, where Giles was to be in the receiving line.

Norris anticipated the event keenly. But as he was waiting in line to be introduced, the Australian-born Pat Olyphant of the Denver Post surreptitiously removed Norris' identity badge and slipped on another. Thus, when it came his turn, Norris was stunned to hear a liveried herald bellow: 'MR. DEREK FLOGGLESWORTHY!'

The thought of it saddens Norris, even today. 'I don't think Giles knew who I was.'



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The Western Mountains 16  
by Jon Ruddy

Len Norris, the cartoonist 26  
by Stuart Keate

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